CLAY

CLAY

EQUIPMENT CATALOG No. 21

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Let's Get Better Acquainted

Farmers and dealers who visit our plant generally express pleasant surprise at the magnitude of our factory operations, and the extent of the CLAY Line. You, too, are cordially invited to visit us.

New Items

The CLAY Line now has reached a high degree of perfection including:

Hot Dip Galvanizing, pages 54 and 55.
Metal Ventilating Windows, pages 31 to 48.
Lever Stalls, pages 60 and 61.

Gates

2,000,000 CLAY Steel Gates (formerly known as Iowa gates) attest dependableness and satisfaction in service. For full details of the most extensive line of gates, second to none, see pages 131 to 143.

Dairy Barn Equipment

To a peculiar degree the originality in the design of CLAY Equipment has proved itself both practical and durable. The various items are fully illustrated, pages 50 to 118.

Farm Engineering

Competent and capable architects and engineers are here at your service ready to help you design and plan better barns, more efficient hog houses, and modern poultry houses.

Ventilation

The CLAY Intake device is the heart of the ventilation system. Read pages 22V and 23V, explaining the astonishing features of self-control and seasonal regulation.

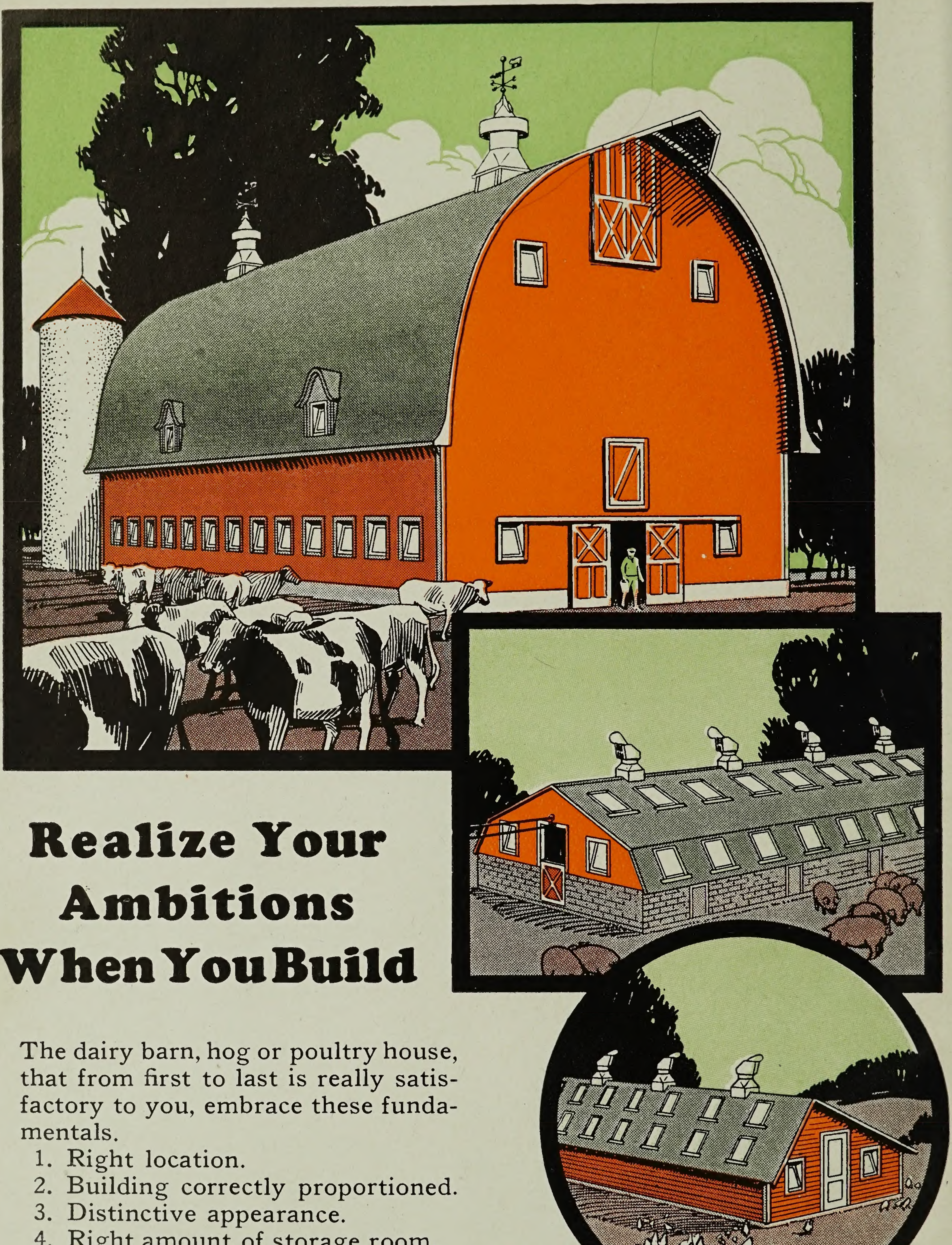
Ornamental and Chain Link Fence

Pages 146 to 156 illustrate the CLAY Line very briefly. Ask for special catalog No. 301.

Separate Catalogs

Catalog No. 21, 160 pages, gates and equipment, and catalog No. 20, 72 pages, ventilation, are sometimes mailed separately. If you receive one, do not hesitate to ask for the other.

CLAY EQUIPMENT CORP.
Cedar Falls, Iowa



Realize Your Ambitions When You Build

The dairy barn, hog or poultry house, that from first to last is really satisfactory to you, embrace these fundamentals.

1. Right location.
2. Building correctly proportioned.
3. Distinctive appearance.
4. Right amount of storage room.
5. Good modern construction — yet not expensive.
6. Proper wall design, constructed according to climate requirements.
7. Correct number, kind and size of windows.
8. Proper ventilation.
9. Comfort for animals housed.
10. Sanitation — cleanliness.
11. Labor efficiency for greatest profit to you.

See Your Barn on paper *Before* You Build

THE Dairy Barn that is built right is the one that is built on paper first. All good barns begin with the plan.

The barn that in use returns to the farmer the biggest interest on his investment is most assuredly the barn that was efficiently planned before the foundation was laid, before the masons came or the carpenters drove a nail. In short, everything that goes to make up a time, labor saving, and money making barn is determined definitely and exactly in advance of the actual construction.

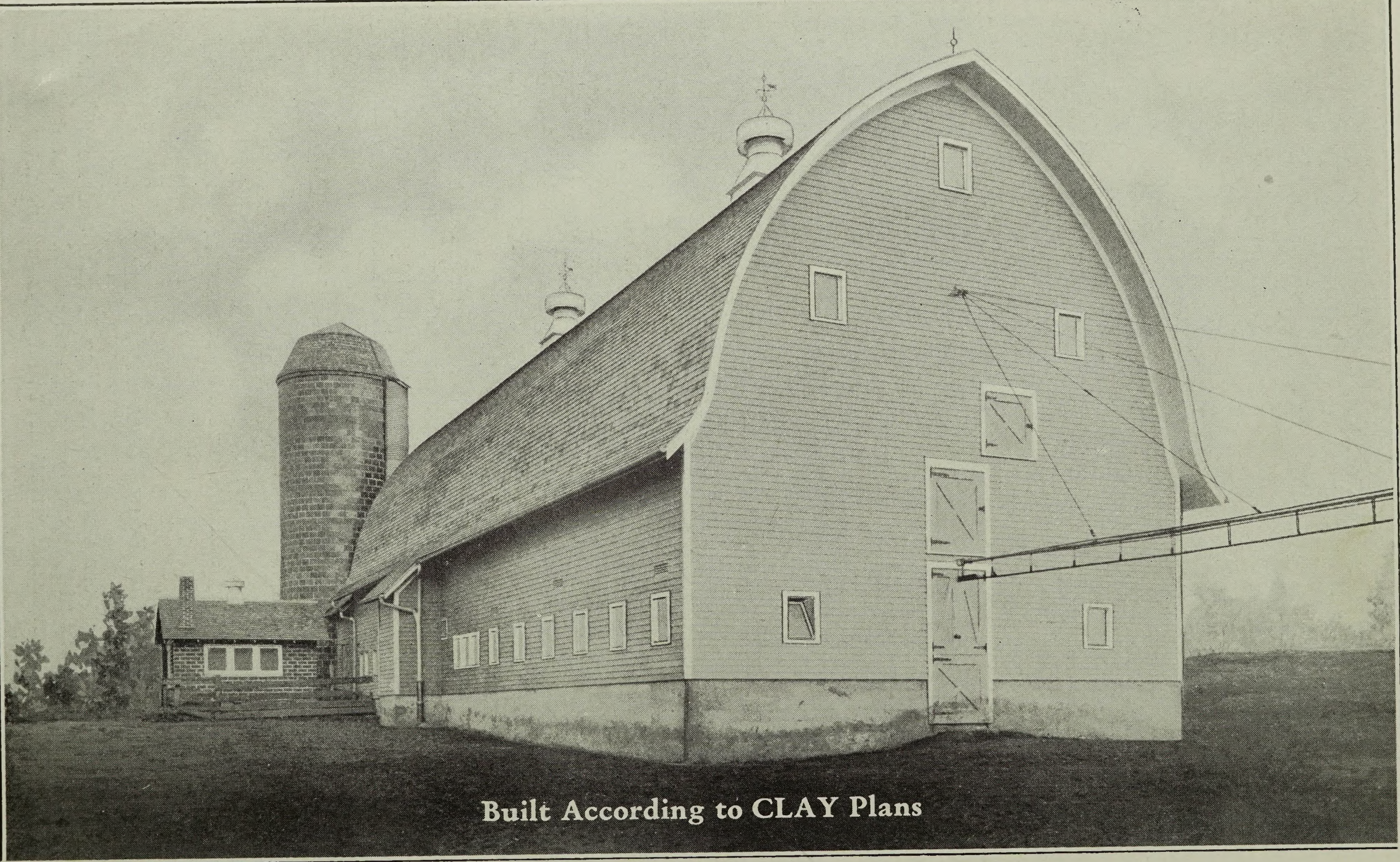
Building without plans is certain to waste time and materials. Costly mistakes are bound to creep in which cost money to correct. Misunderstandings and disagreements will arise, resulting in expensive changes and dissatisfaction. An unplanned barn usually is a money loser — the well planned barn, a money maker.

The plans shown in this book cost but a trivial sum. They are carefully worked out by men of known reputation, engineers who have had many years' experience and this assures you the best building at the lowest cost. Since you pay for planning either before, while building, or after the building is up, why not pay a small amount for complete plans and avoid the risks and losses?

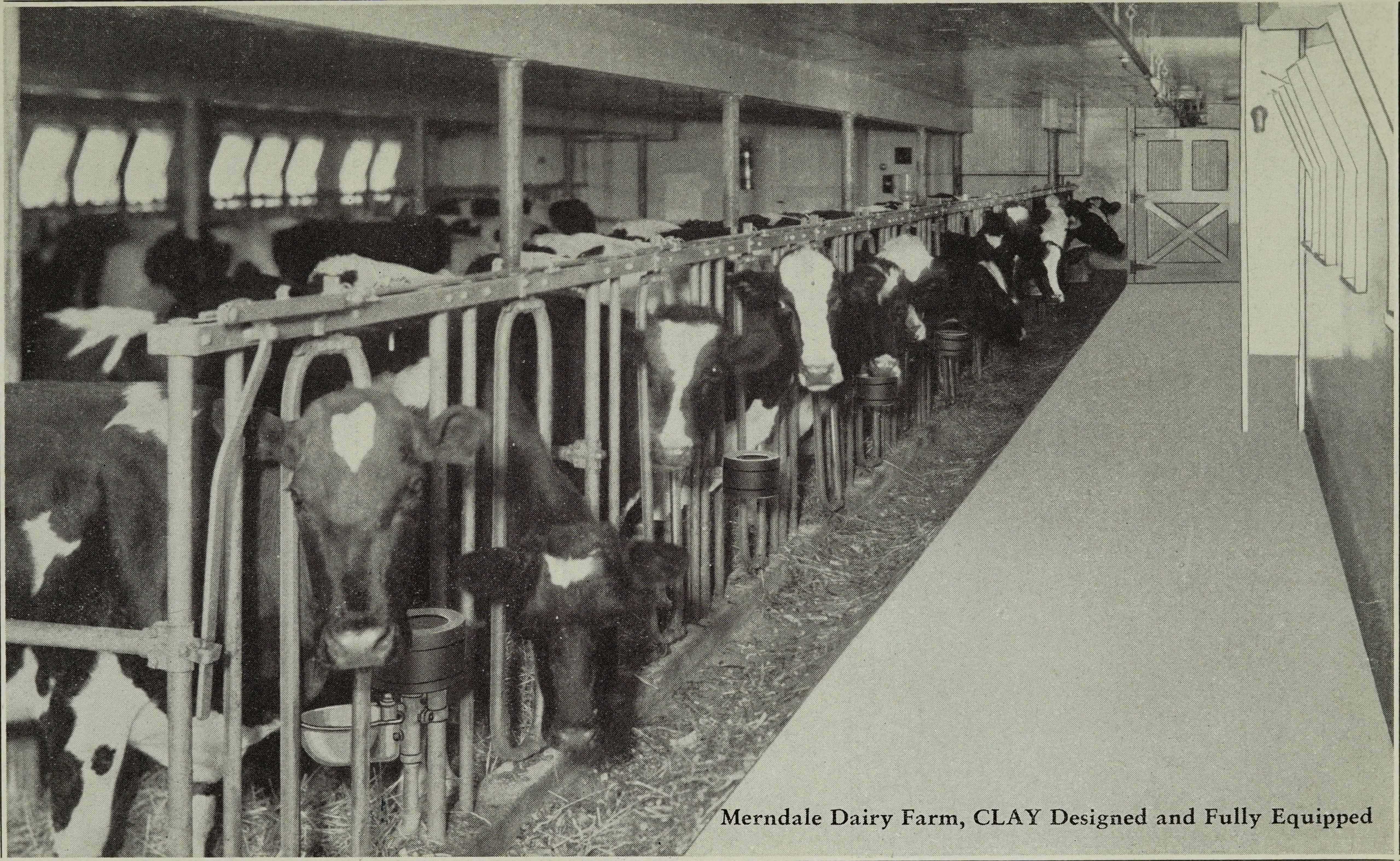
How Clay Plans Save Money

CLAY Building Plans for Dairy Barns, Hog Houses and Poultry Houses will save you money in many ways. Make no mistake about it, plans are not an expense, rather a small investment that pays you big returns.

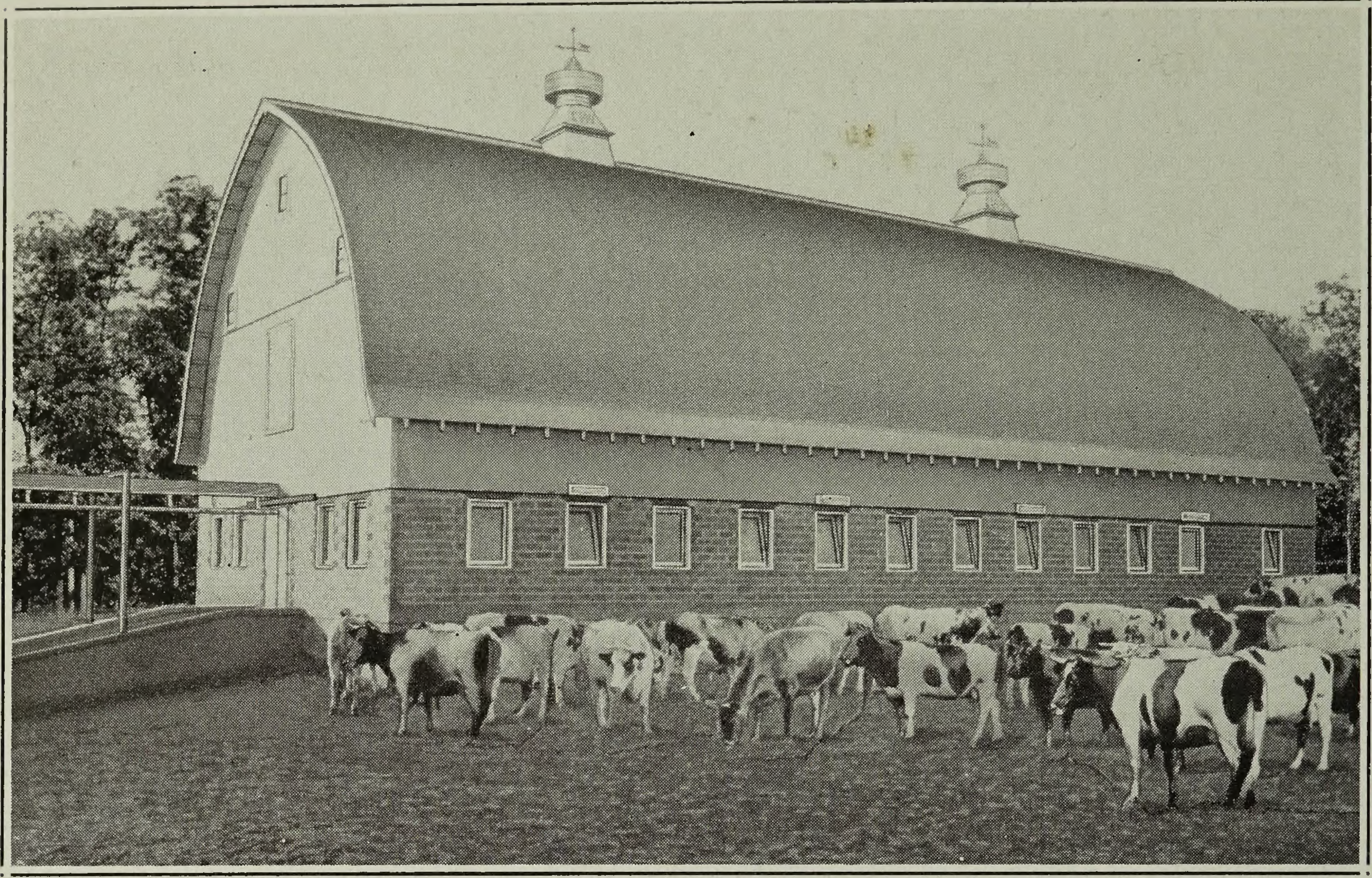
Continued on Page 7.



Built According to CLAY Plans



Merndale Dairy Farm, CLAY Designed and Fully Equipped



Gothic Roof Design
No. 1000

A well proportioned Dairy Barn following the popular Gothic lines and offering a pleasing dignity. 34′ wide by 80′ long. 34′ to the ridge.

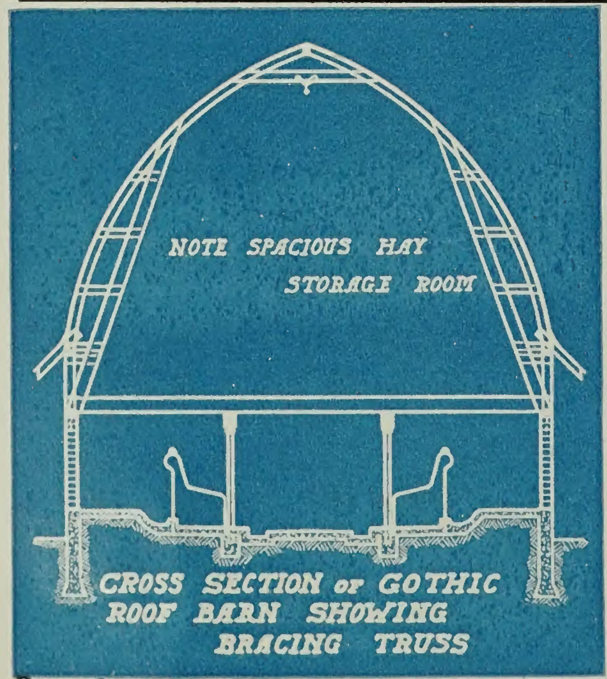
The stable height is 8′ 5″ to bottom of joist. The walls are built of multicell hollow tile (wood or tile walls as desired.)

Stable capacity for thirty-two cows and three pens — can be extended. Mow capacity is approximately eighty-five tons.

Use CLAY building plans and prevent 15% to 20% waste of materials, loss of time and labor.

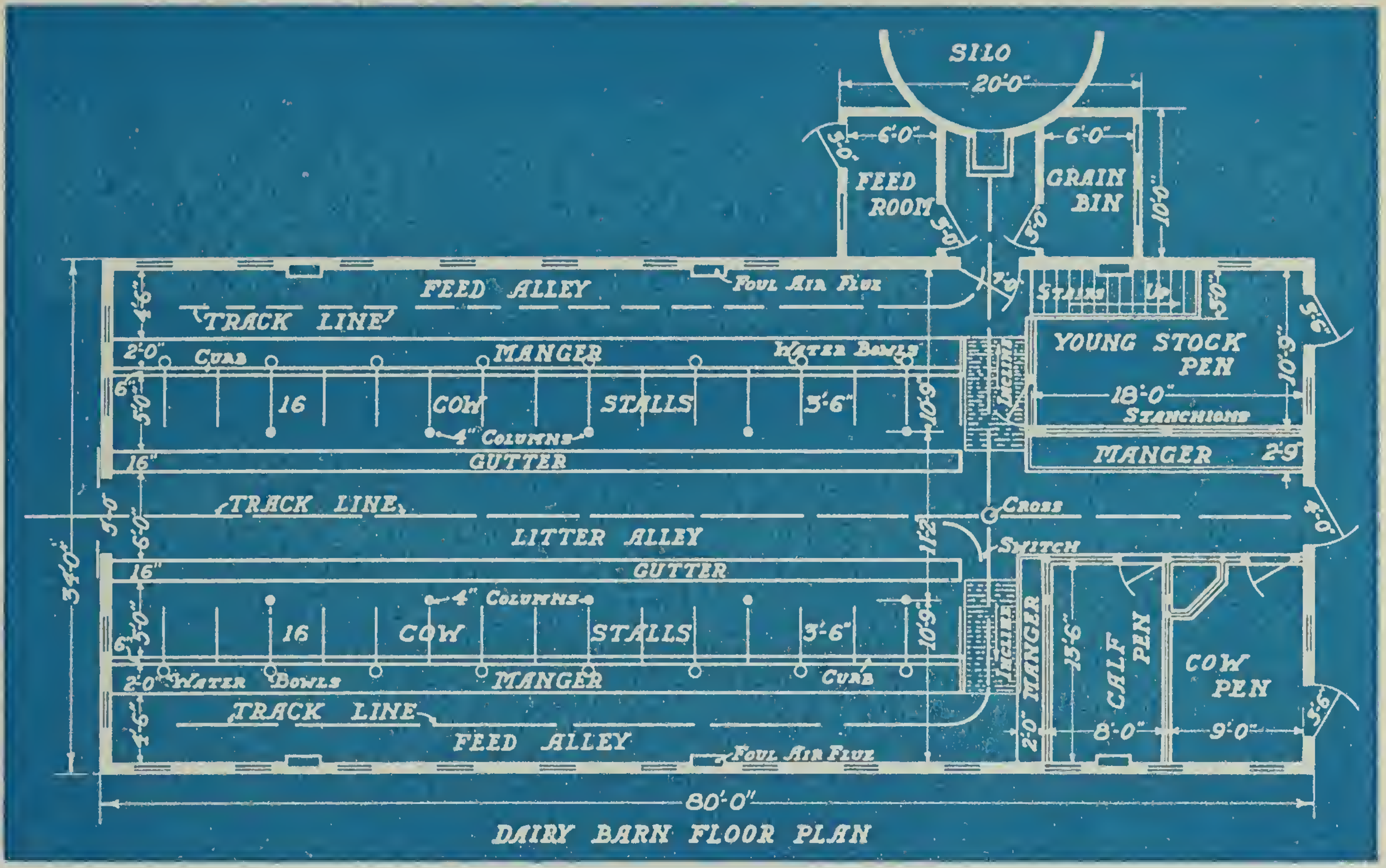
CLAY Plans assure you the best construction, handiest arrangement for convenience in barn work.

Animal comfort, proper lighting, maximum storage room and efficient ventilation are obtained in all of them. CLAY Plans cost but very little. The saving runs into hundreds of dollars.


NOTE SPACIOUS HAY STORAGE ROOM
CROSS SECTION OF GOTHIC ROOF BARN SHOWING BRACING TRUSS

Plan No. 1000,
$5.00

Stable plan, cross section elevation, side elevation, end elevation, all details.



DAIRY BARN FLOOR PLAN

No. 1000

An efficient and practical barn arrangement for the successful dairymen. Feed room and grain bin do not take up much floor space, yet they are always handy for feeding from inside, and for filling from outside. Stairway utilizes waste space over the calf pen. Bull pen has been purposely omitted as it is always desirable to house the bull in separate quarters, away from the herd and young stock.

Write us for plan of bull paddock and breeding rack.

Getting a Better Building

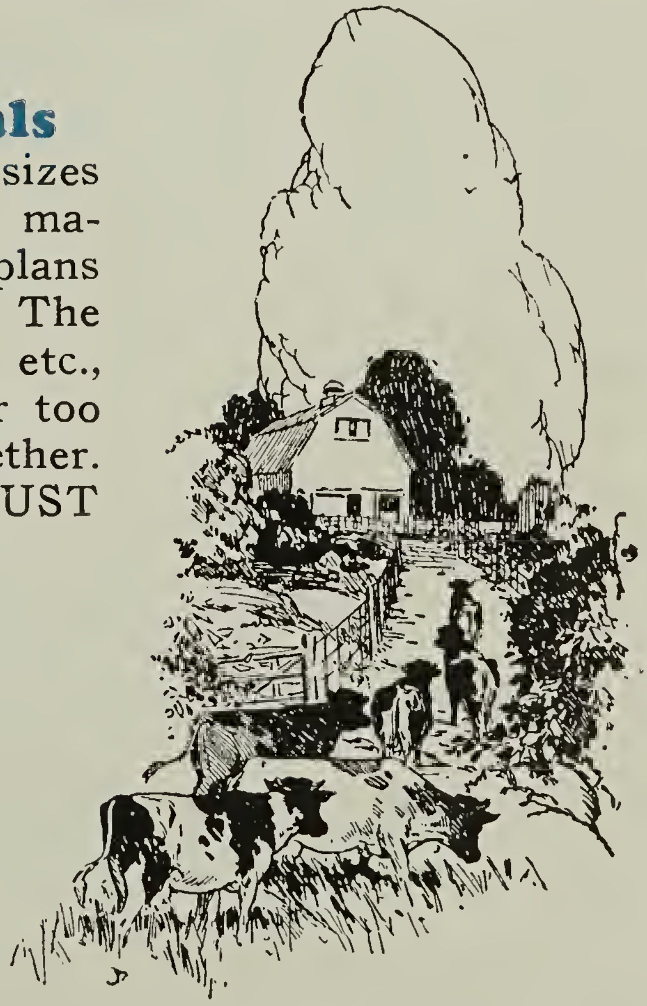
CLAY Designed farm buildings are plain, practical, common sense buildings planned with the idea that fancy frills and showy exteriors don't pay dividends. Nevertheless, they are distinctive in appearance and show evidence of your good taste and judgment.

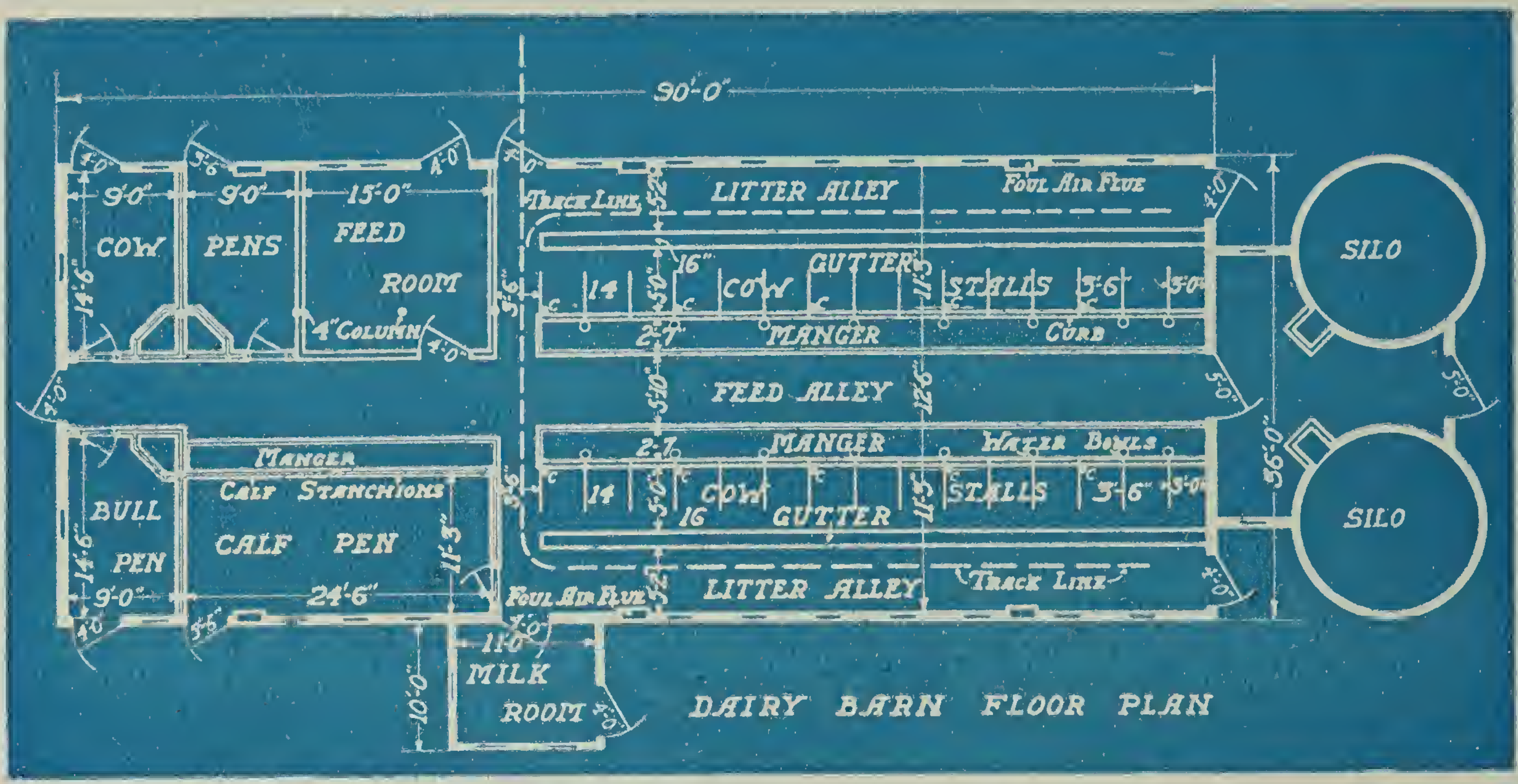
Save Money By Saving Materials

CLAY Plans use standard or commercial sizes of building materials, no needless waste of materials or time. All items shown on CLAY plans are exactly right for the purpose intended. The spacing and sizes of joists, beams, rafters, etc., are carefully shown, neither too many nor too few, not too far apart, nor too close together. Not wastefully strong or not too weak — JUST RIGHT.

Plans Avoid Loss of Time

Save time and worry. Plans are simple and easy to follow. No standing around wondering what to do next. Everything to speed up the work is carefully planned, no time consumed in temper-trying discussions.





No. 1001

When You Build, Build Right

To attain perfection in the building of a barn, hog or poultry house these very vital facts must be considered, namely:

(a) Foundation
(b) Wall Construction (insulation)
(c) Stable Capacity
(d) Feed Storage
(e) Mow Capacity
(f) Doorways
(g) Access to Cattle Yard
(h) Manure Pit or Dump
(i) Post and Beam Location
(j) Type of Roof
(k) Window Spacing and Size
(l) Ventilation
(m) Cow Stalls-Pens
(n) Horse Stalls

Architectural Department

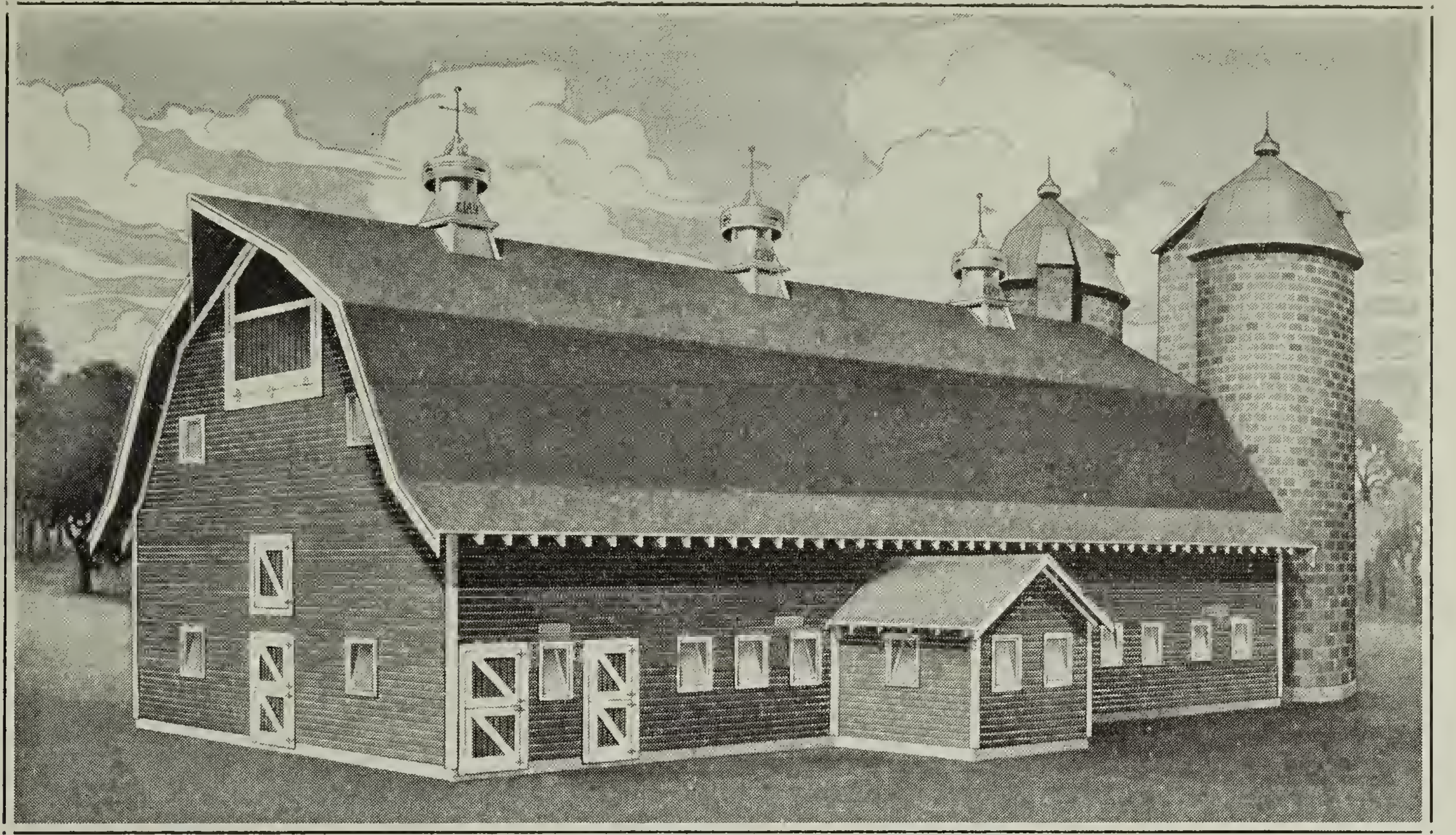
Perhaps you are not satisfied with the present arrangement of your barn and you plan to remodel it, or perhaps you intend to build new. If so, have you ever taken pencil and paper and tried to plan your barn? Doubtlessly you found it a hard problem.

A misplaced stairway will necessitate extra steps day after day as long as the barn is used. Which way should the cows face, where to put the pens, horse stalls, milk room, etc., how much ventilation and where to put the flues are all questions which demand expert advice.

This is where the CLAY Architects can be of valuable assistance to you. These architects are specialists in designing farm buildings. They have a great wealth of ideas gained through years of actual planning and testing. They are prepared to give suggestions on the smallest job, or to offer detailed plans and specifications on the largest job.

Free Service

We are prepared to supply on suggestions from you any stable arrangement plans either in pencil or blue prints to meet your particular requirements without charge.



Gambrel Roof Design No. 1001

Its handsome appearance has attracted much attention.

36′ wide by 90′ long. 35′ to ridge. 8″ cement wall extends 1′ above ground. Height from foundation to under eaves is 14′ 6″. Stable is 7′ 10″ to mow joist. CLAY Ventilating Windows. Has a well lighted, airy milk house, conveniently located. Stable plan for this barn page 8.

Designed for 30 cows, 5 pens — can be extended.

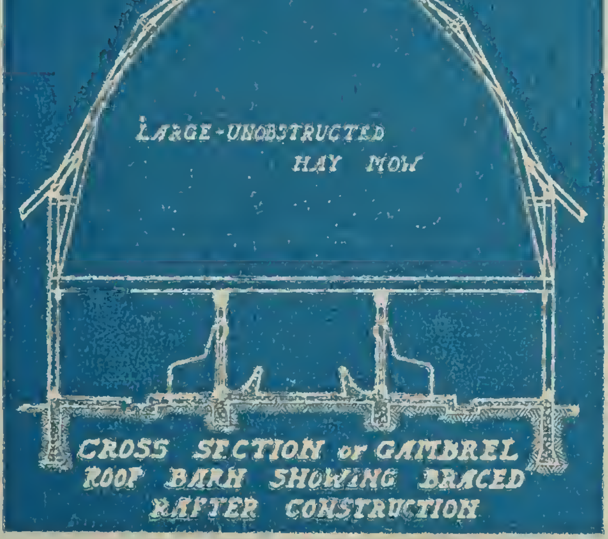
Mow capacity approximately 100 tons.

"Good Buildings" Essential to Success

Attractive, well constructed buildings add greatly to the value of a farm. They promote the health and productiveness of animals housed in them. Properly planned they pay their cost in a short time.

Good buildings strengthen the owner's confidence in farming. Children have greater pride in their home and this oft times decides whether they remain on parental soil or leave for the uncertainty of some distant city.

Good buildings make a good farm better.

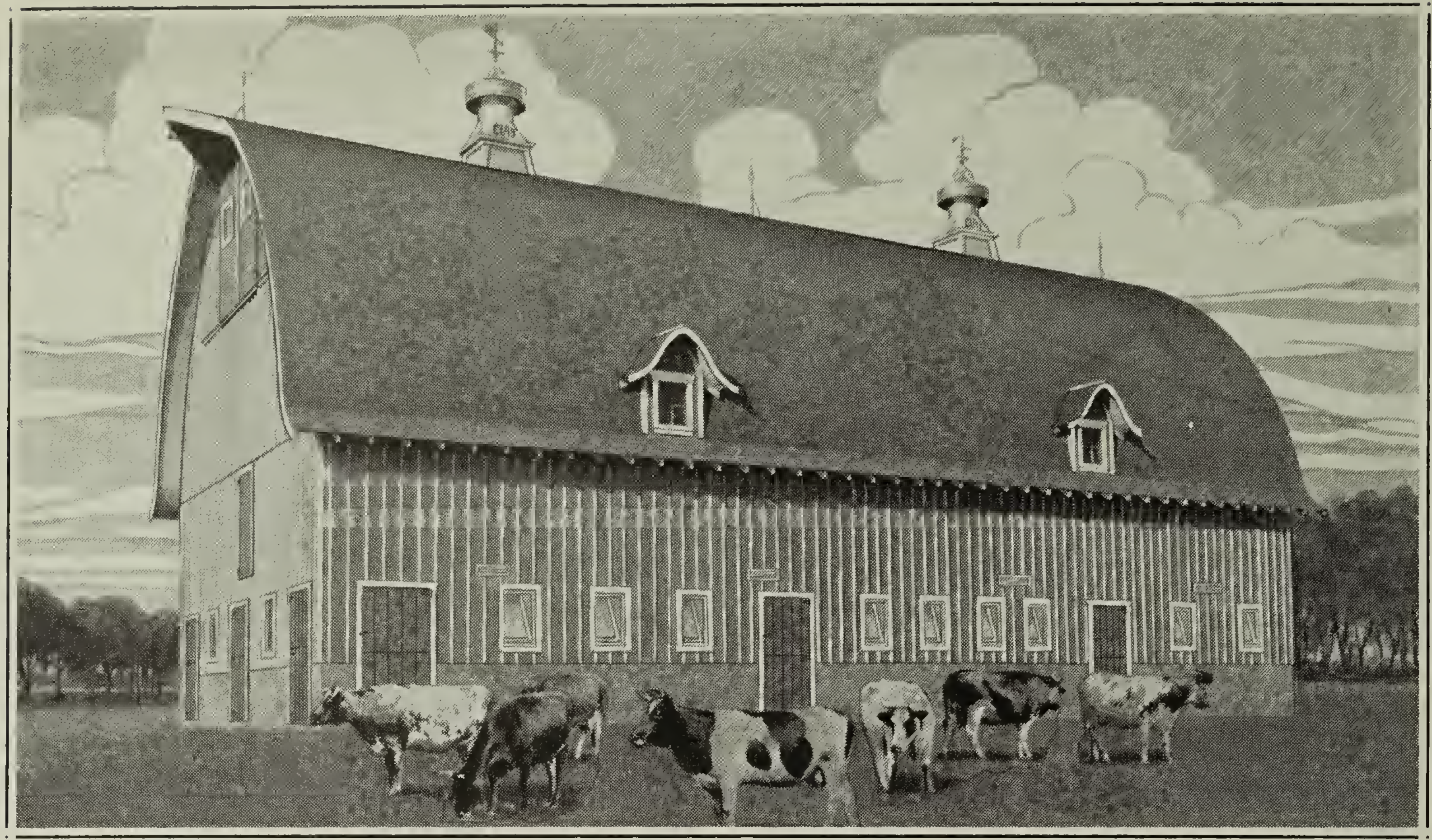


CROSS SECTION or GAMBREL ROOF BARN SHOWING BRACED RAFTER CONSTRUCTION

Regardless of size of barn you build, CLAY plans give you the benefit of the most advanced engineering knowledge in construction and arrangement. Well balanced barns, in which every detail is provided assuring maximum profit return.

Plan No. 1001, $6.00

Stable plan, cross section elevation, side elevation, end elevation, all details.



Gothic Design, No. 1002

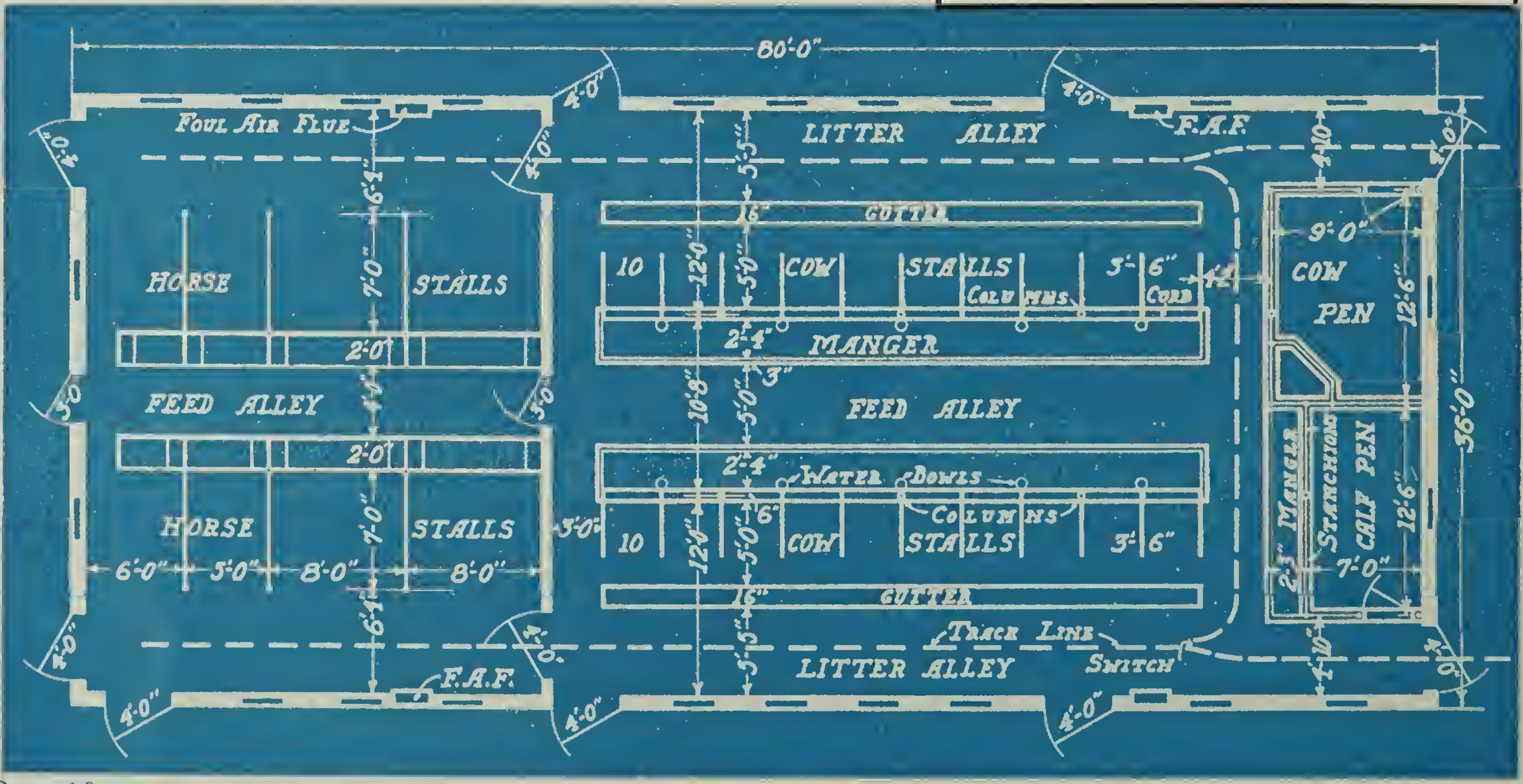
The barn shown here has the popular Gothic roof. Its popularity is growing due to its pleasing appearance, its greater mow capacity as well as the absence of interfering trusses in the mow. Because of these advantages many farmers are willing to pay slightly more for this outstanding construction.

The floor plan has been arranged for the general farm where horses and cows are stabled in the same barn, but you will note that in this arrangement the horses have been entirely separated from the dairy cows except for the doors connecting the two sections.

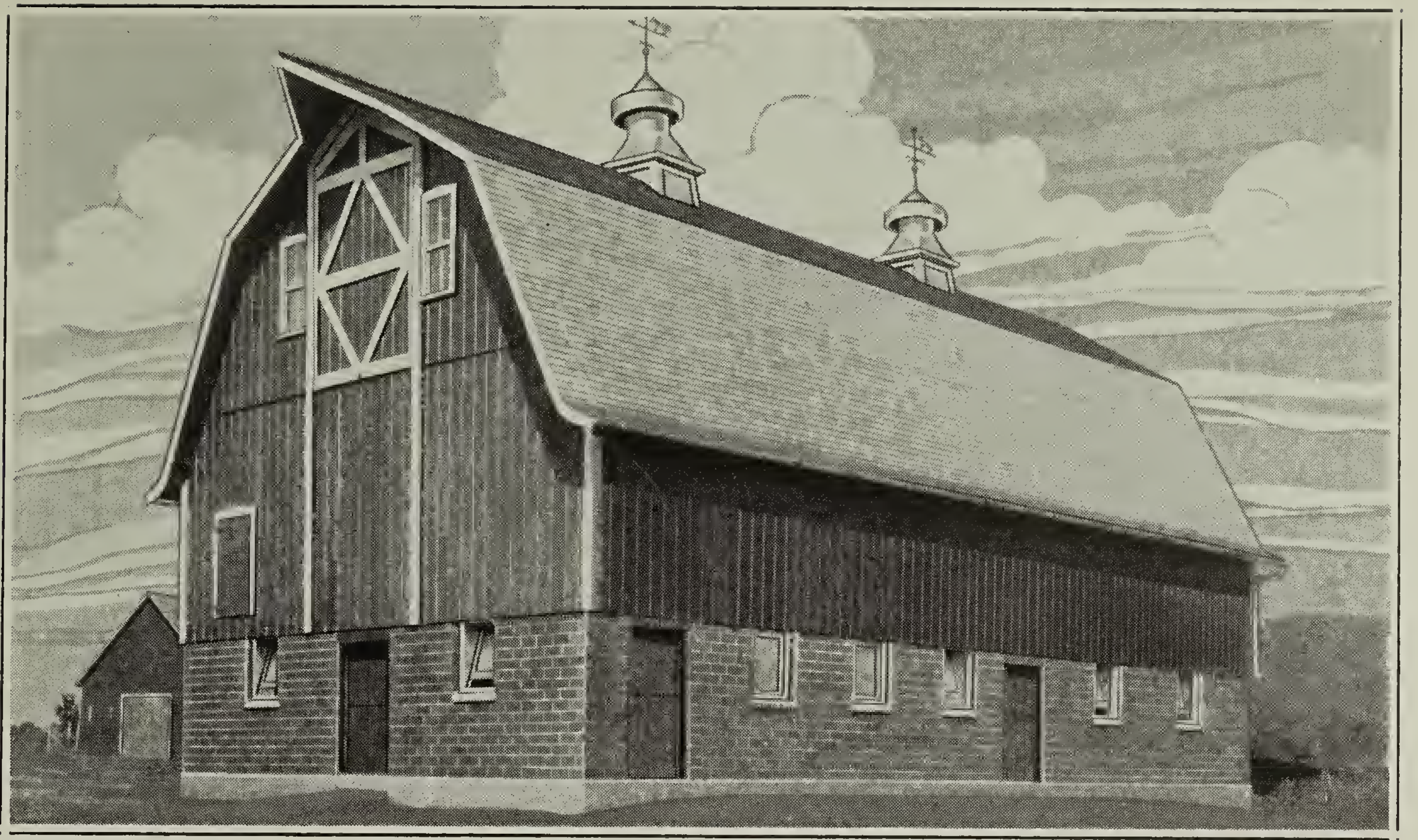
You will also note the many different ways of handling feed and litter which this plan affords. The silos could be placed at the end next to pens and the same track used for feed and litter carrier. The litter could be taken out at either of the side doors, or thru the end doors in the horse stable.

Plan No. 1002, $5.00

Stable plan, cross section elevation, side elevation, end elevation, all details.



No. 1002



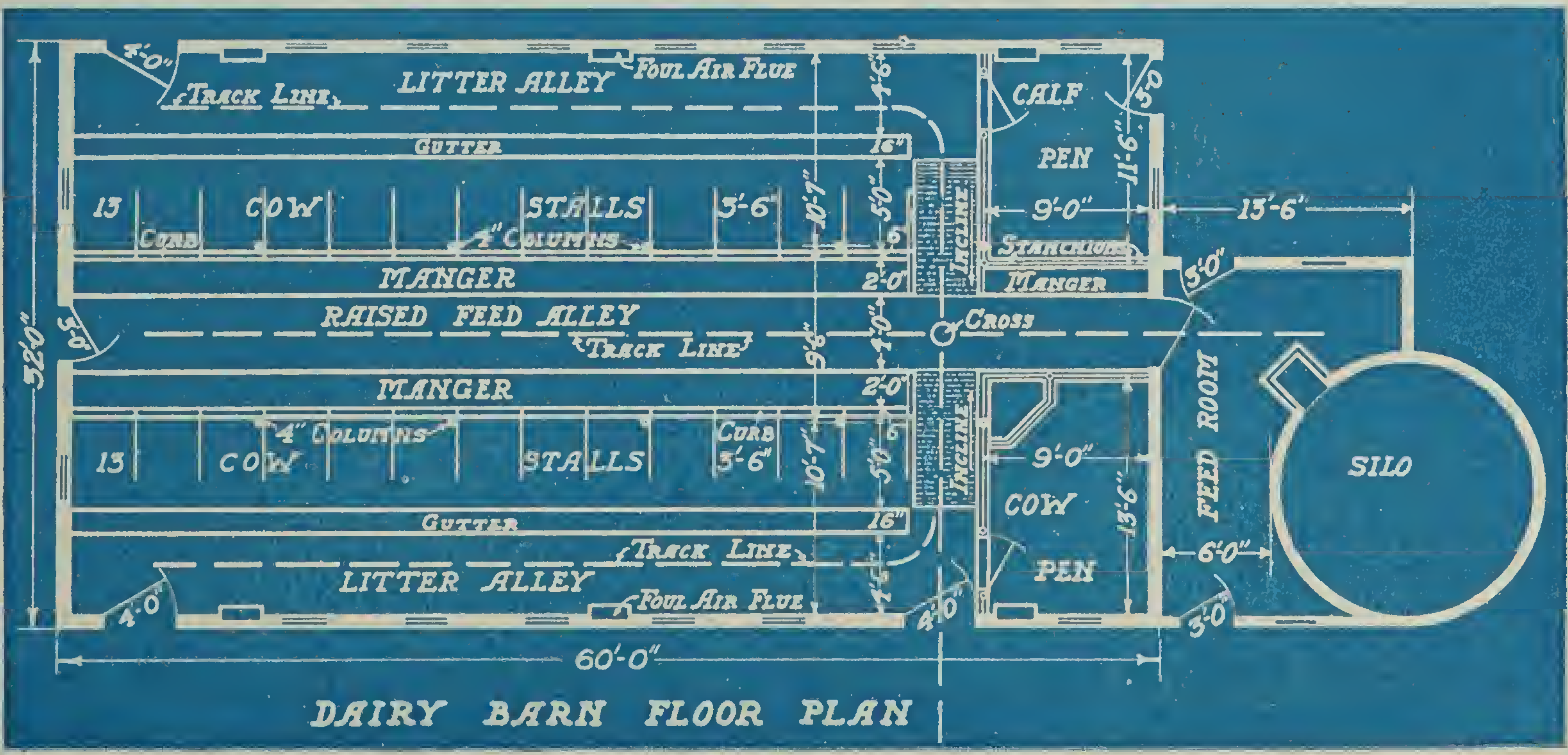
Gambrel Design No. 1003

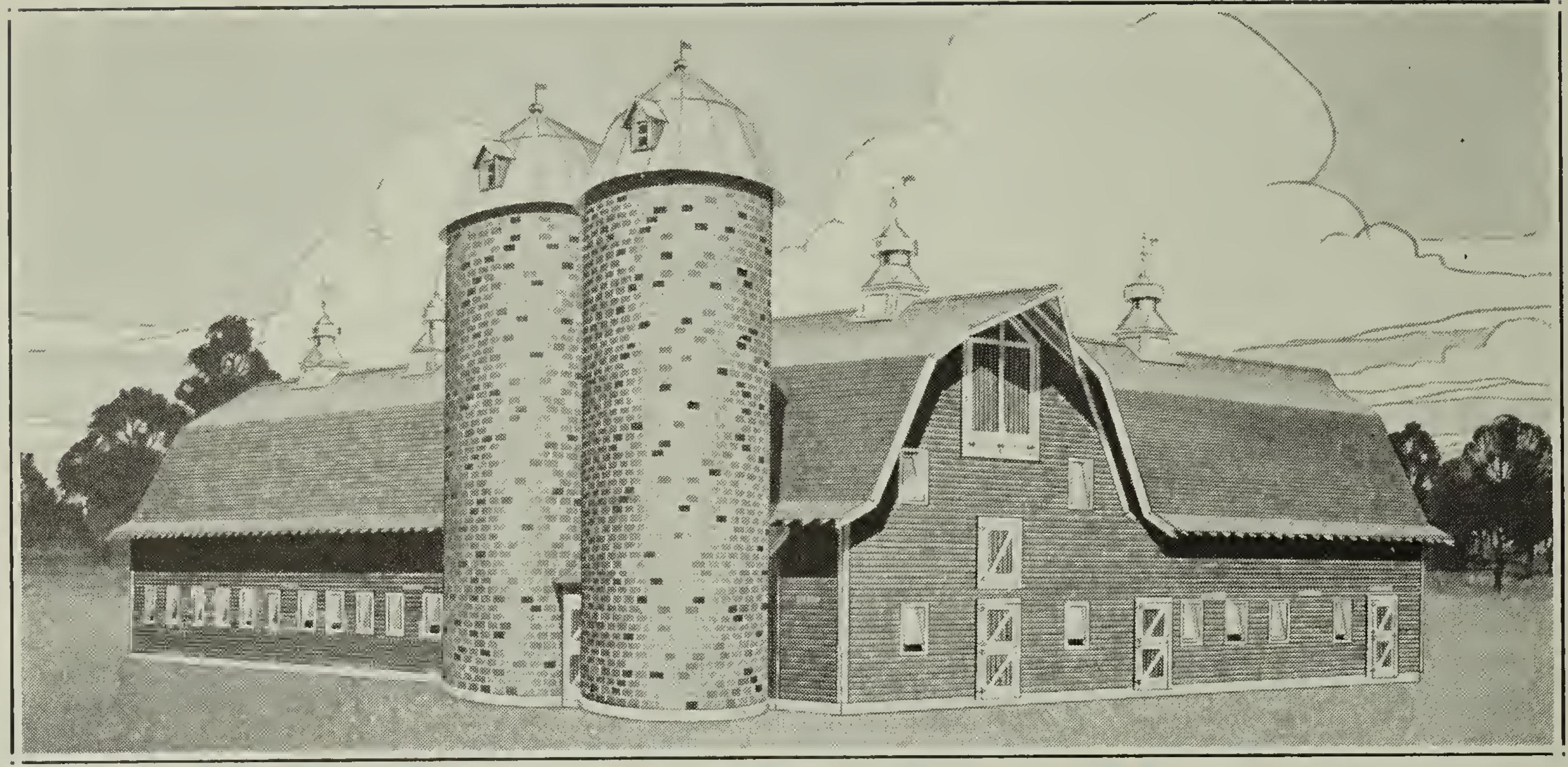
In the better dairy sections of the country there is a strong tendency to house the dairy cows separate from other live stock. In some places this is even compulsory thru city milk ordinances. This plan has been designed with that in mind. It appeals to many because of its compact yet uncrowded arrangement. There is no waste space, no expensive cross alleys. Every square foot of floor area has been wisely used. Note the large feed room next to silo, the pens located so that in each case two walls of the building form two sides of the pen.

Plan No. 1003,
$5.00
Stable plan, cross section elevation, side elevation, end elevation, all details.

CLAY Plans assure you of getting exactly the barn that most nearly meets all your requirements. Every detail is provided for maximum production at minimum cost.

Getting along with an old barn is expensive.





"L" Type Dairy Barn No. 1004

Here is illustrated the Clay L type barn. The main building for stalls and the wing for pens.

The central location of silos and feed room will save many steps. The two sections provide a sheltered and sunny paddock both for bull and calves. The grain bins are accessible for filling from a wagon.

Cows provided with this pasture-like comfort will produce more. Labor costs and feed bills are reduced while profits are increased.

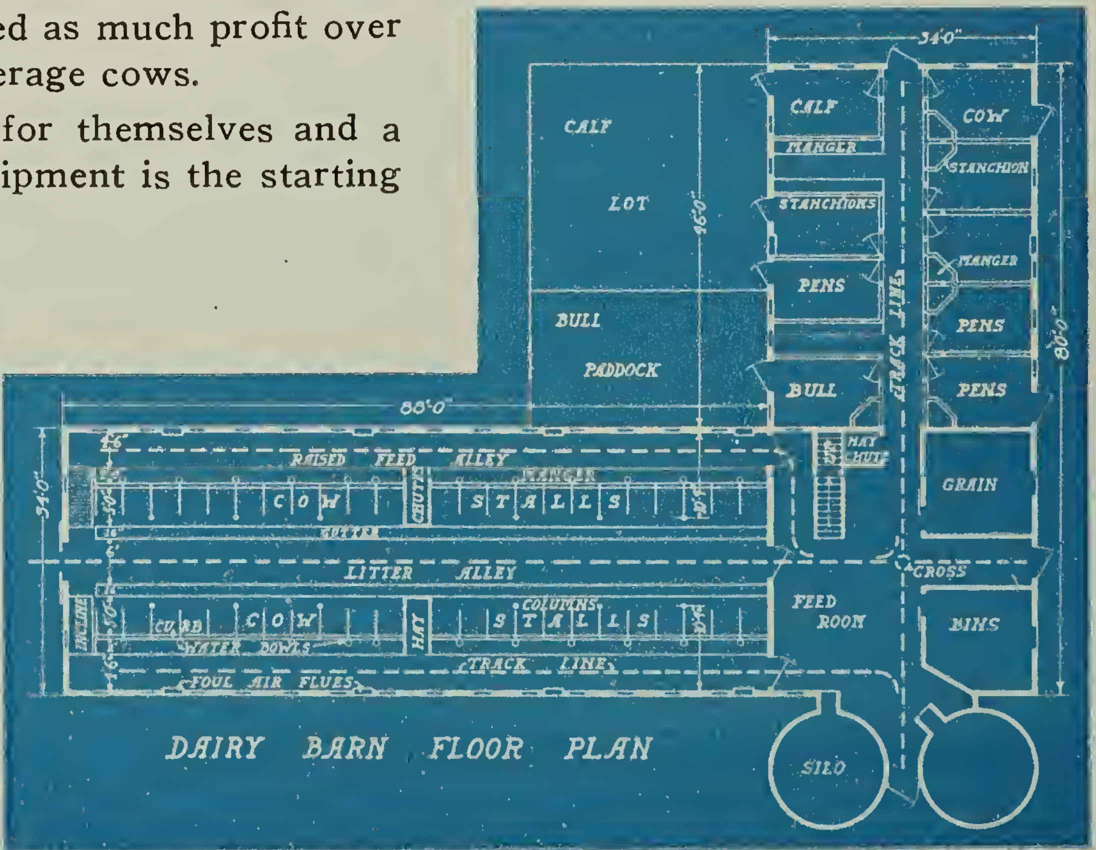
Something to Think About

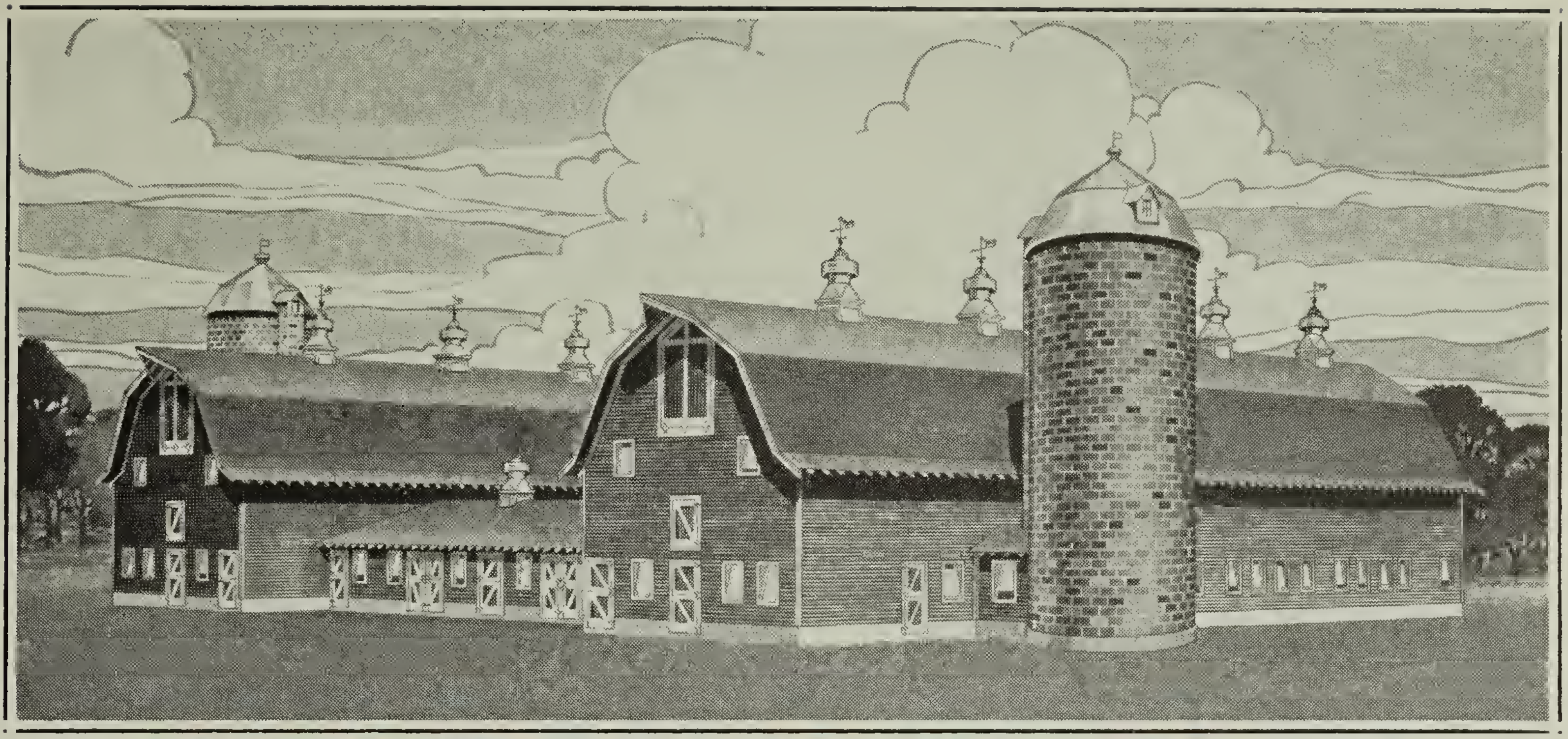
The dairy herds of the United States include about 22,000,000 cows. About 400,000 of these are tested each month for milk and butter production, enabling owners to eliminate the unprofitable cows. In 1926 on the basis of comparative records 360,000 of these tested cows produced as much milk as 584,000 average cows, and returned as much profit over cost of feed as 640,000 average cows.

Better methods pay for themselves and a good barn with good equipment is the starting point.

Plan
No. 1004
$8.00

Stable plan, cross section elevation, side elevation, end elevation, all details.





"U" Type Dairy Barn No. 1005

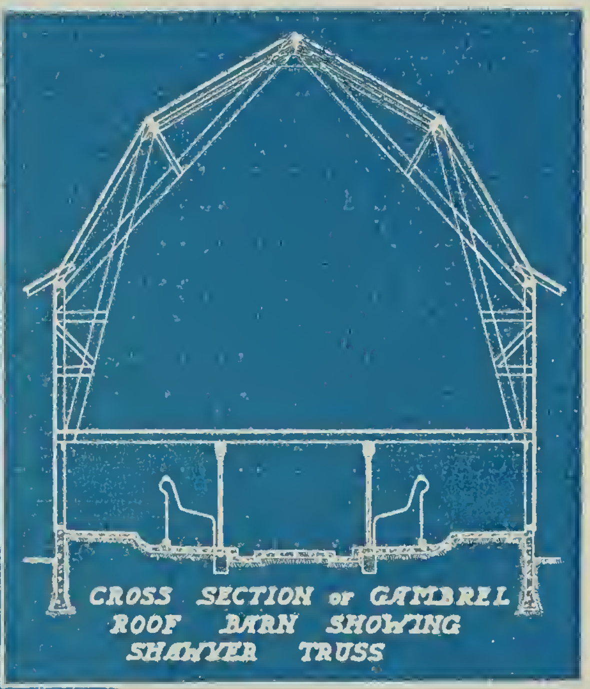
A long narrow barn is drafty, therefore it is harder to keep a uniform temperature and more difficult to properly ventilate.

For a 100 cow barn these disadvantages are eliminated in the U type barn illustrated here.

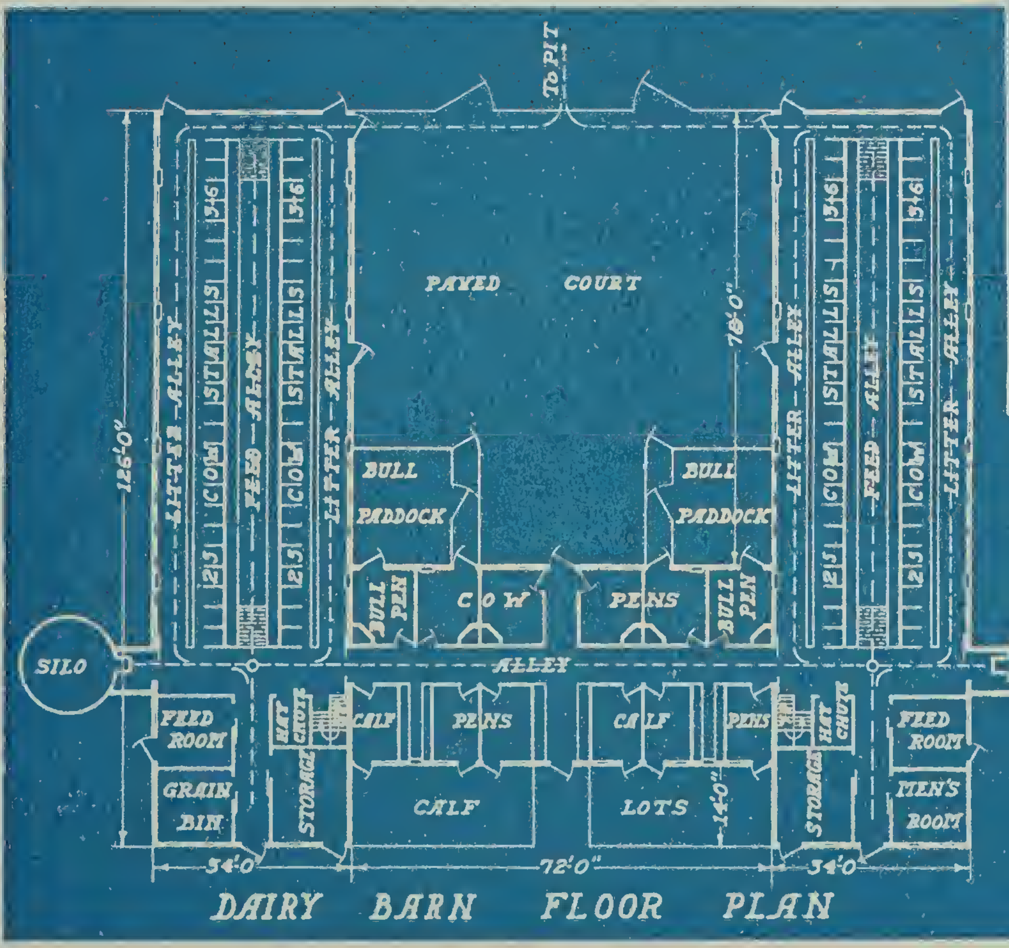
A "U" barn conserves in yard space and keeps all the stock in a more compact unit.

The cross barn between the two main barns is cheaply built because the two end walls are eliminated and roof cost of construction is much less.

The protected court affords an ideal yard for winter exercise.



CROSS SECTION of GAMBREL ROOF BARN SHOWING SHAWVER TRUSS



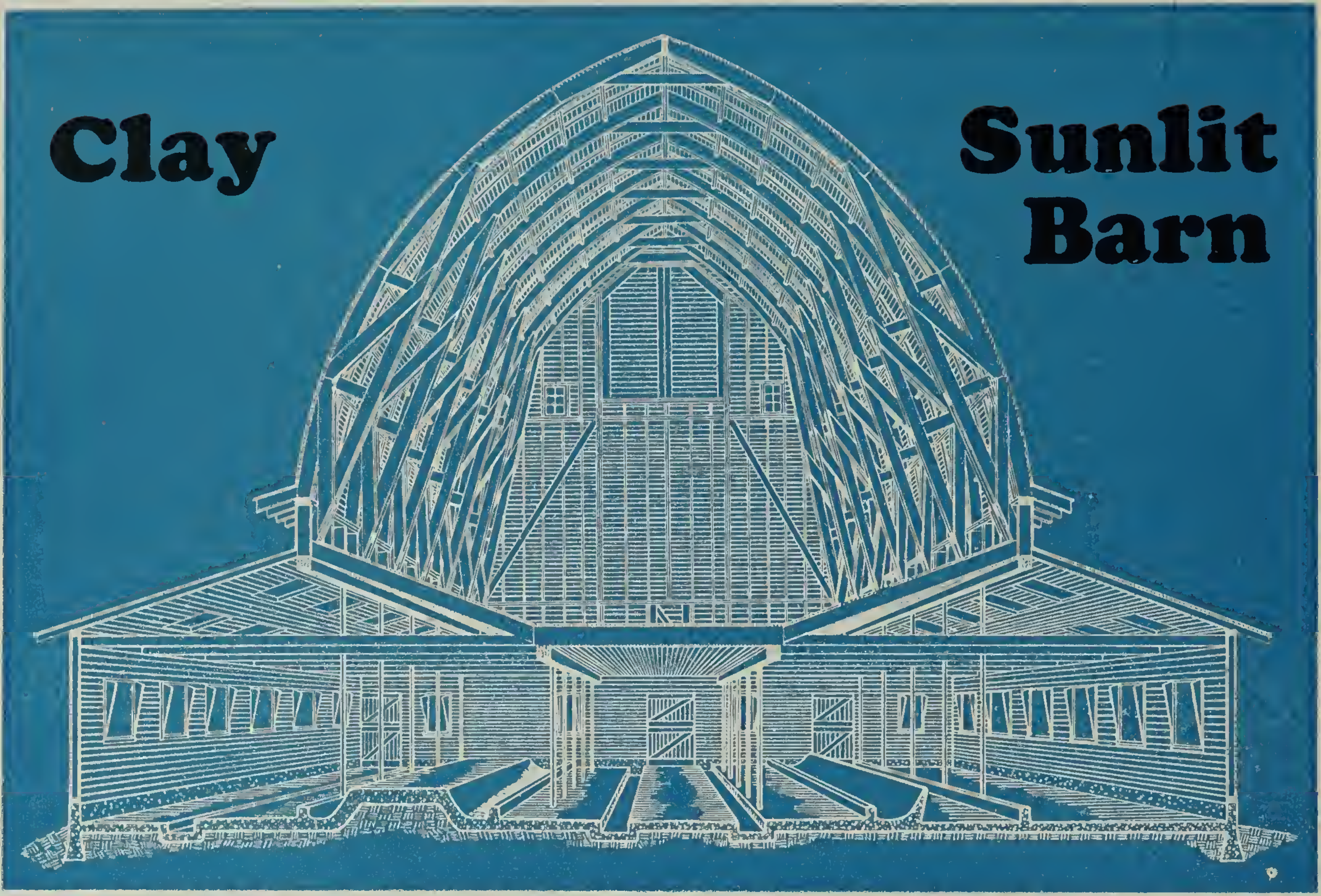
DAIRY BARN FLOOR PLAN

Plan No. 1005

$8.00

Stable plan, cross section elevation, side elevation, end elevation, all details.

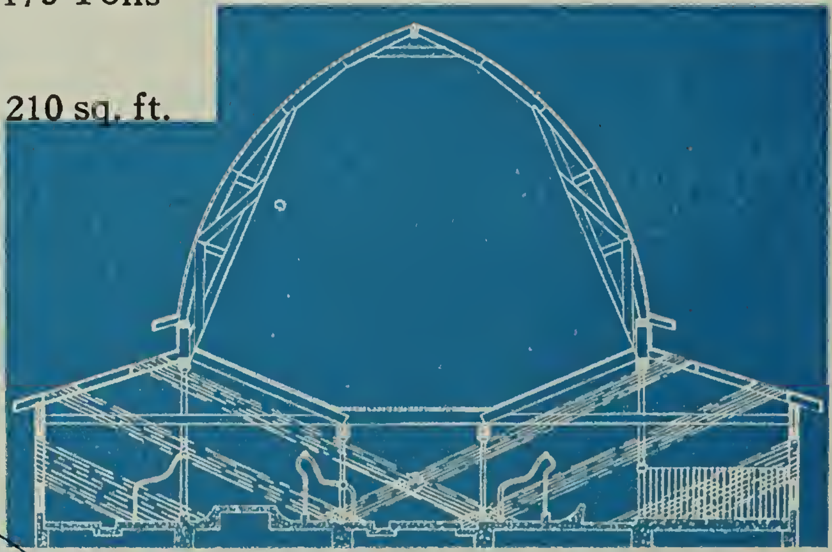
Clay Sunlit Barn



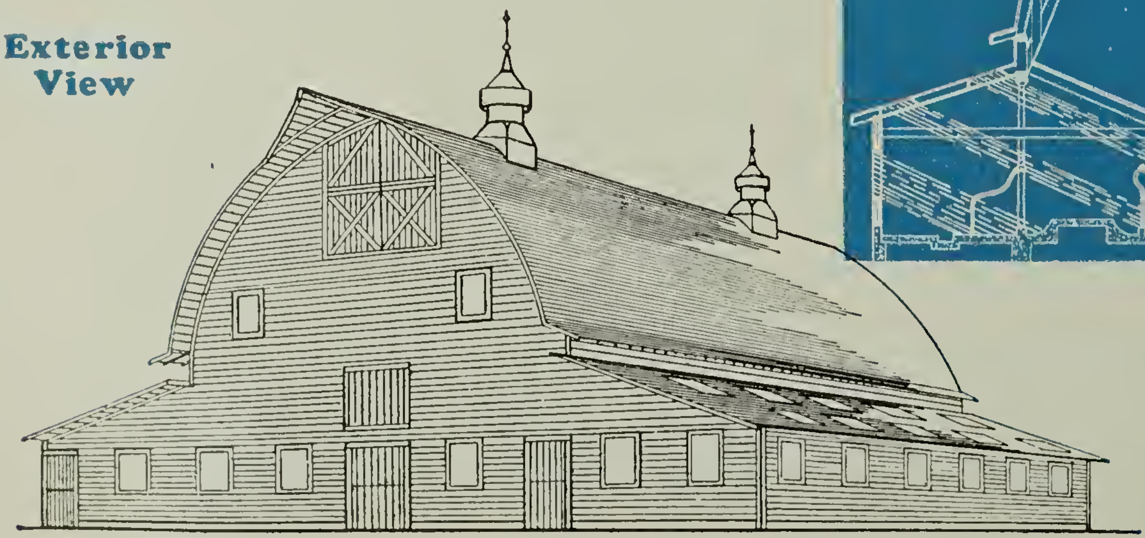
Study the comparison shown below to realize the tremendous savings in building costs this construction offers compared to a long barn housing the same number of stock. Keeps all the stock more compact, minimizing the chores because of saving steps to a remarkable degree.

	Clay Sunlit Barn 57'-0"x61'-0"	Conventional Long Barn 36'-0"x122'-0"
Floor Area	3346 sq. ft.	4195 sq. ft.
Roof Area Main	4680 sq. ft.	
Roof Area Lean-to	1755 sq. ft.	
Total Roof Area	6435 sq. ft.	9072 sq. ft.
Outside Wall Area	4093 sq. ft.	4364 sq. ft.
Concrete Floor	1400 cu. ft.	1726 cu. ft.
Concrete Foundation	664 cu. ft.	1144 cu. ft.
Concrete Footings (22)	81 cu. ft.	66 cu. ft.
Cu. Ft. in Stable	37149 cu. ft.	41724 cu. ft.
Mow Capacity	79 Tons	175 Tons
Windows Side Wall	92 sq. ft.	
Windows, Roof	76 sq. ft.	
Total	168 sq. ft.	210 sq. ft.

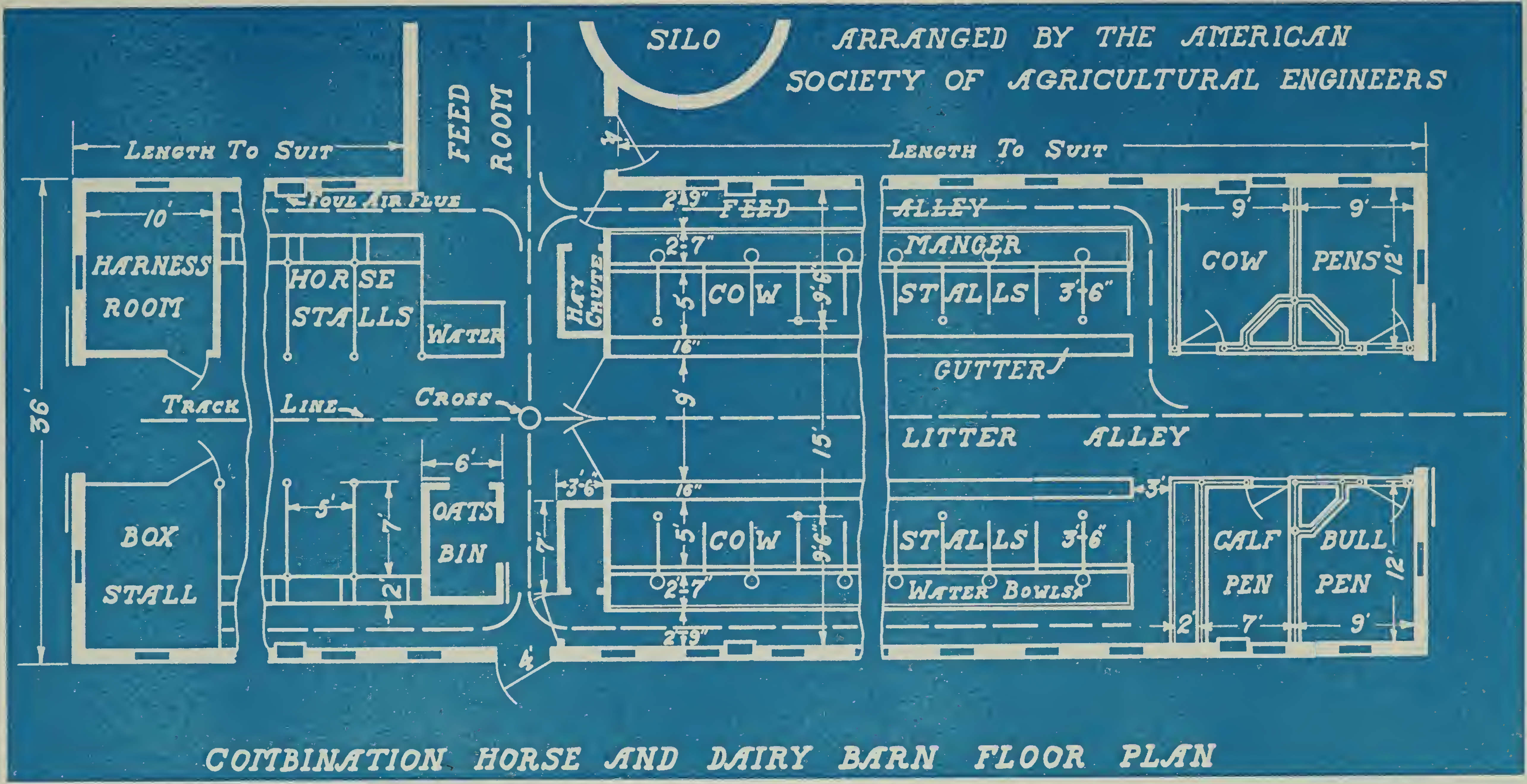
Sunlight from roof windows in Lean-to spreads past the middle of this wide barn.



Exterior View



Glass figured 1 sq. ft. to 20 sq. ft. of floor.

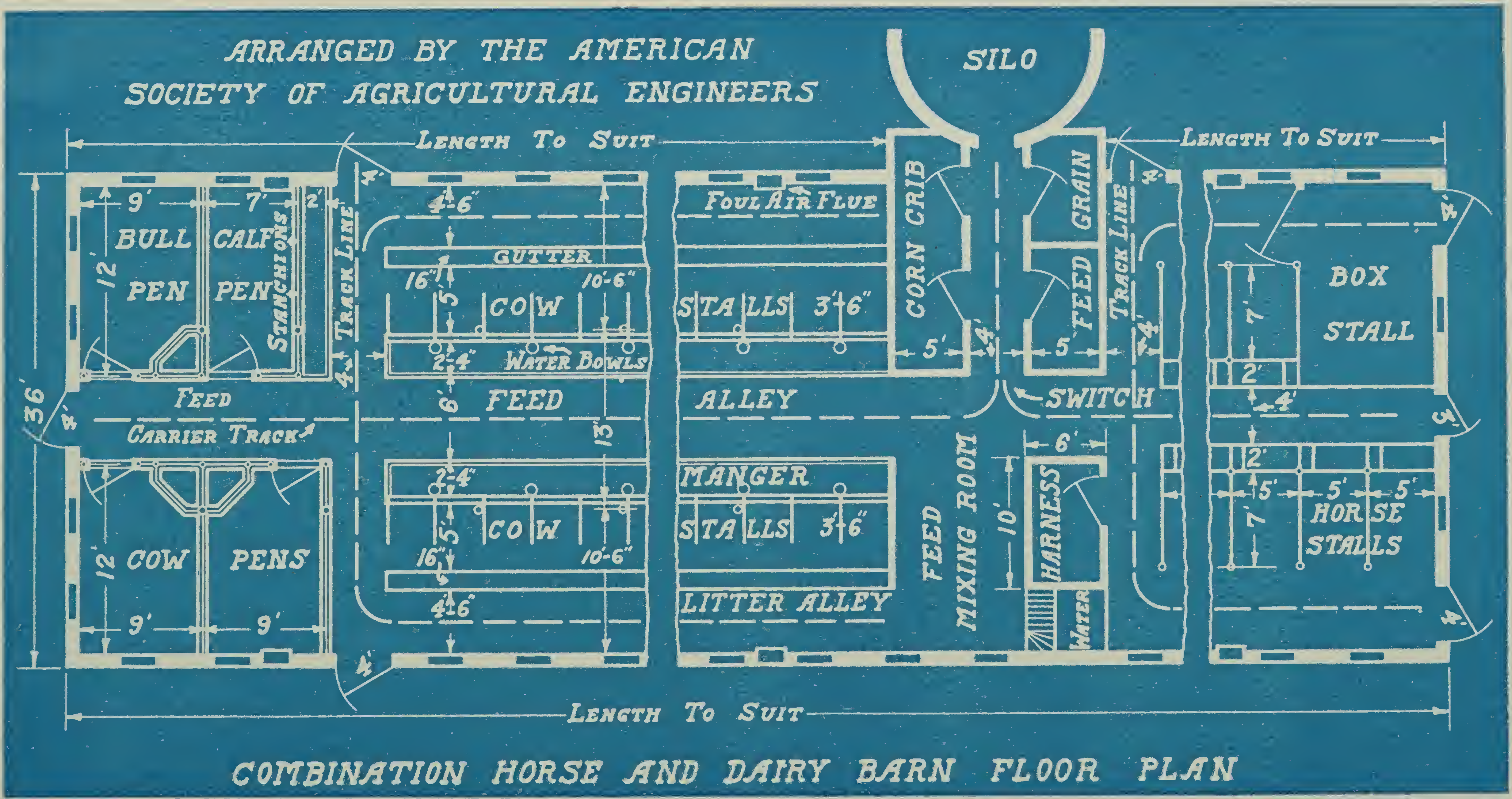

ARRANGED BY THE AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS

COMBINATION HORSE AND DAIRY BARN FLOOR PLAN

A Suggested Stable Arrangement

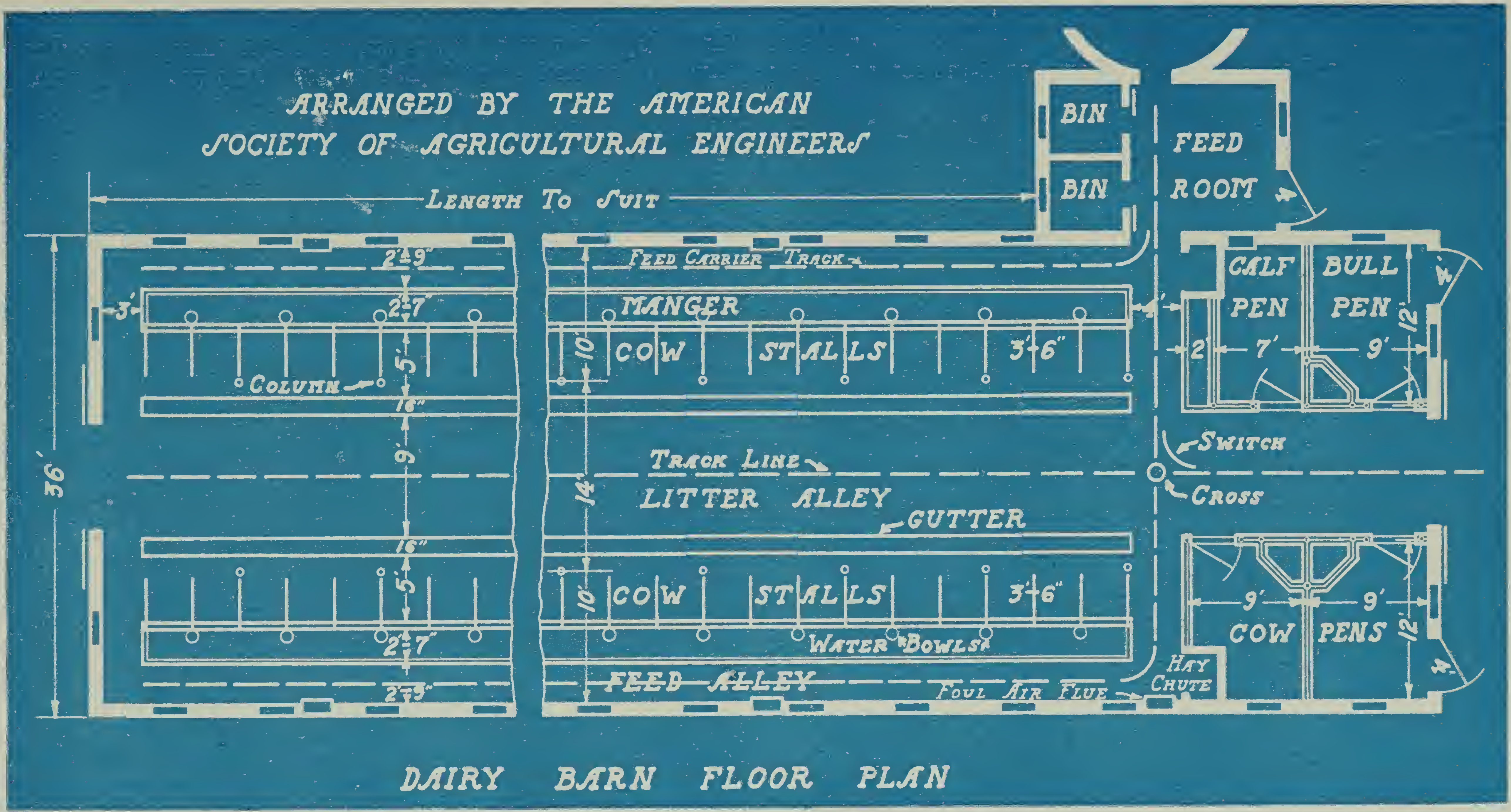
This floor plan shows a simple and practical arrangement for combination dairy and horse barn. With perhaps minor changes it can be adapted to the needs of almost any dairyman regardless of the size of his herd.

Ends of barn should be North and South. Then the morning sunshine will reach the windows on one side and afternoon sunshine those on the other side.



A Handy Stable Arrangement

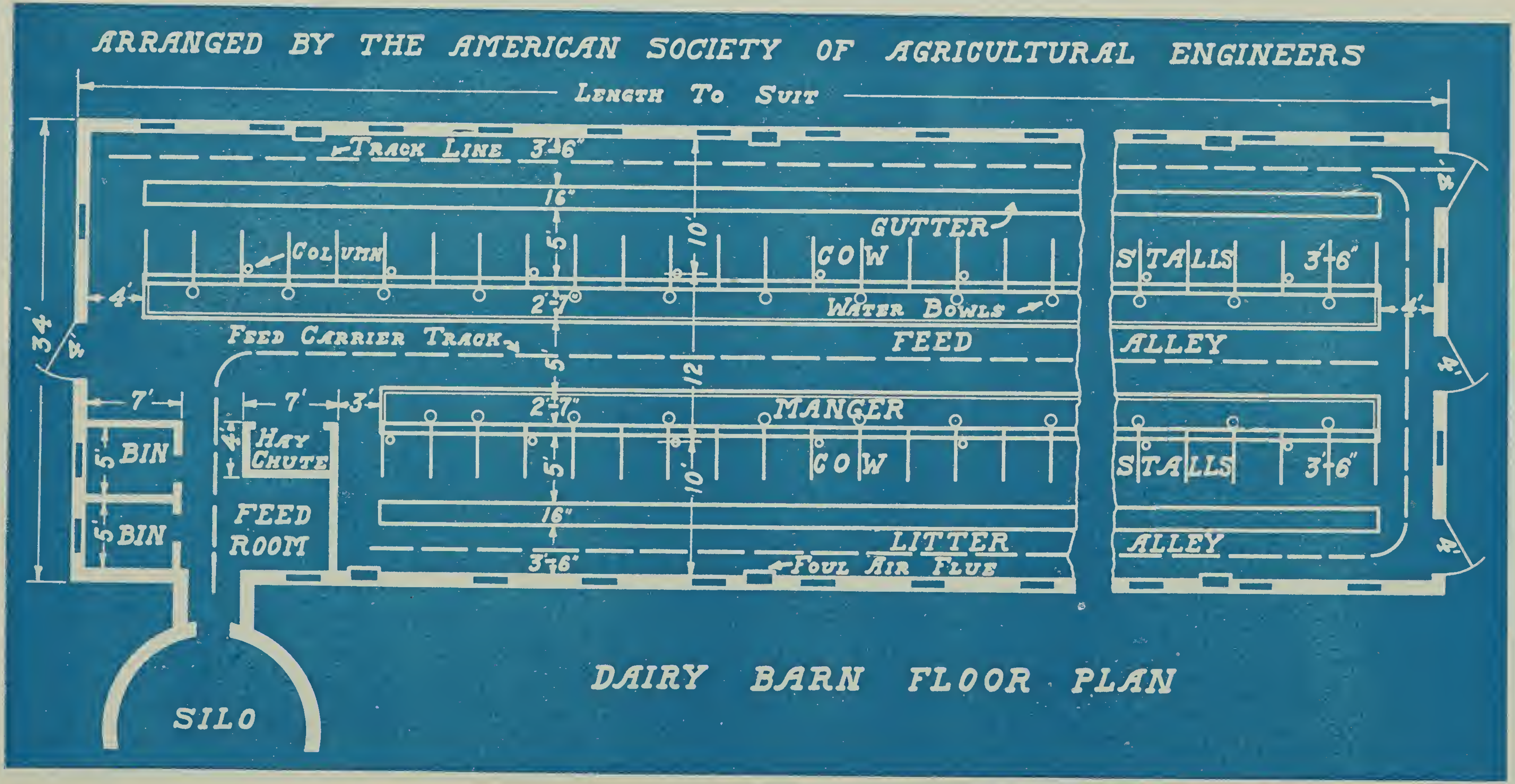
Note that feed and storage room is inside the stable. It is mighty handy in stormy weather and will prove worth the small space required. Silo on side permits extension as herd increases may demand.



How Do You Like This Arrangement?

While the plan shows this as strictly a cow barn, a horse stable can be added very easily.

A stable arranged like this plan shows will save many steps in doing the chores.

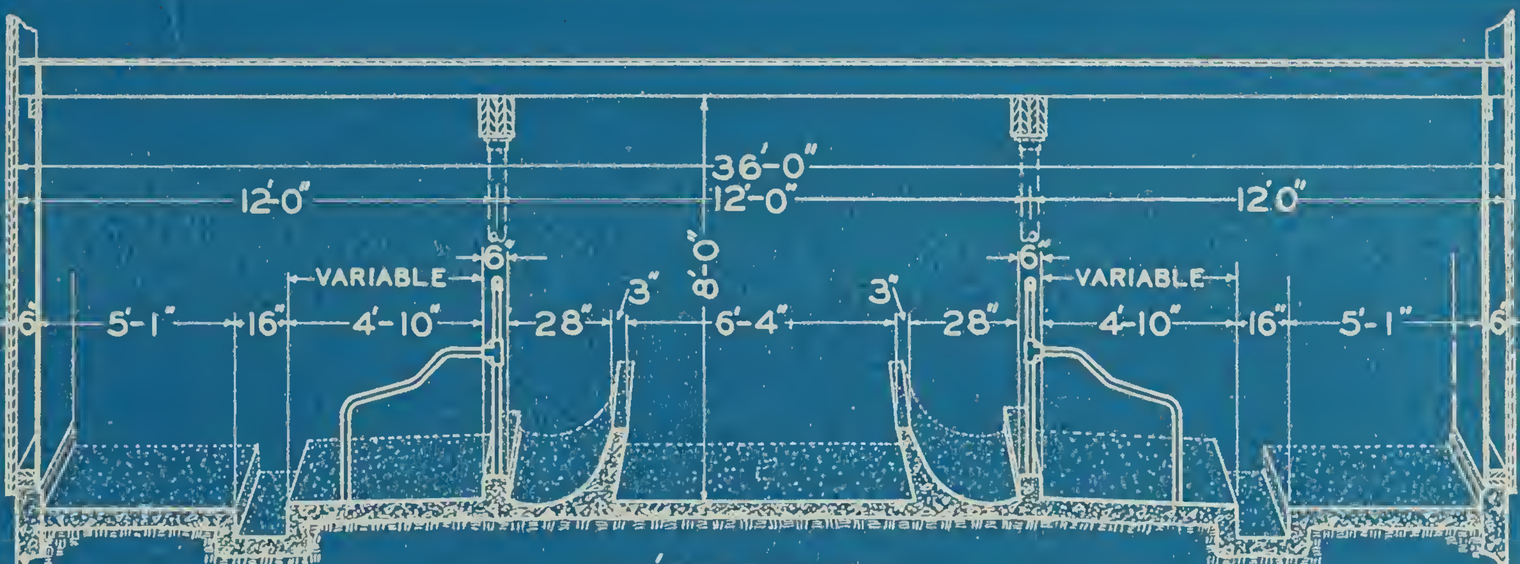


Arrangement For Cows Only

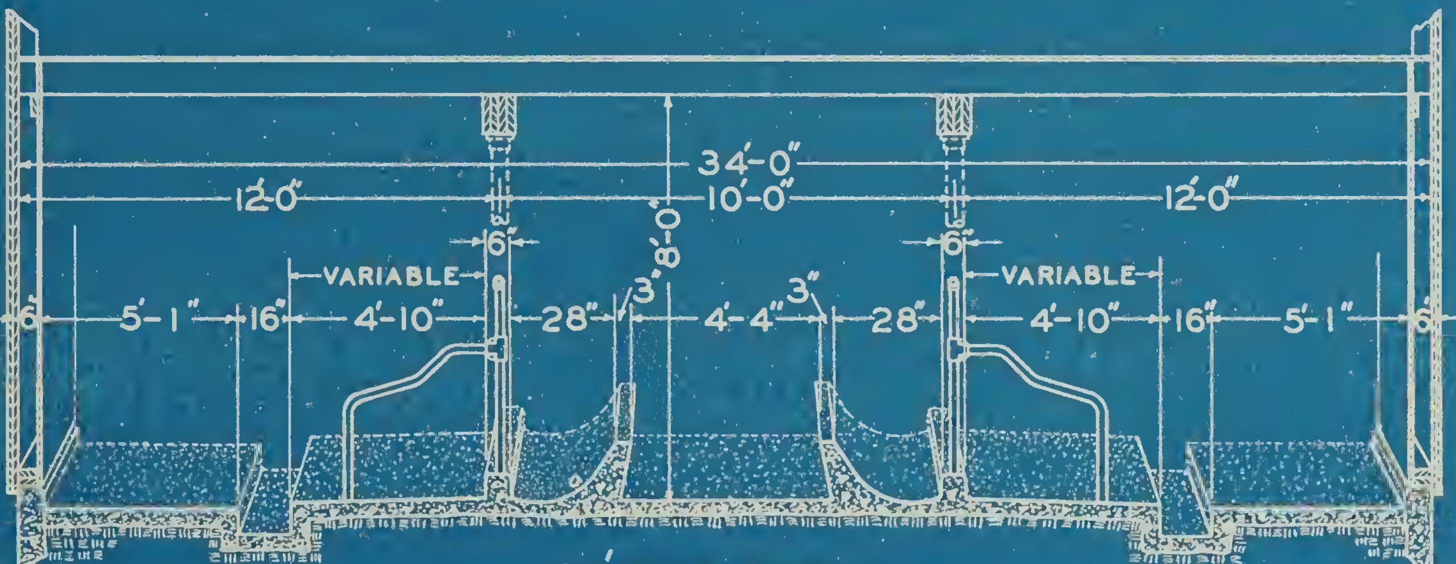
A well arranged dairy stable equipped as you see to save labor. Plan shows arrangement of an exclusive dairy barn. Broken lines suggest that barn may be longer or shorter as needed.

STABLE MEASUREMENTS

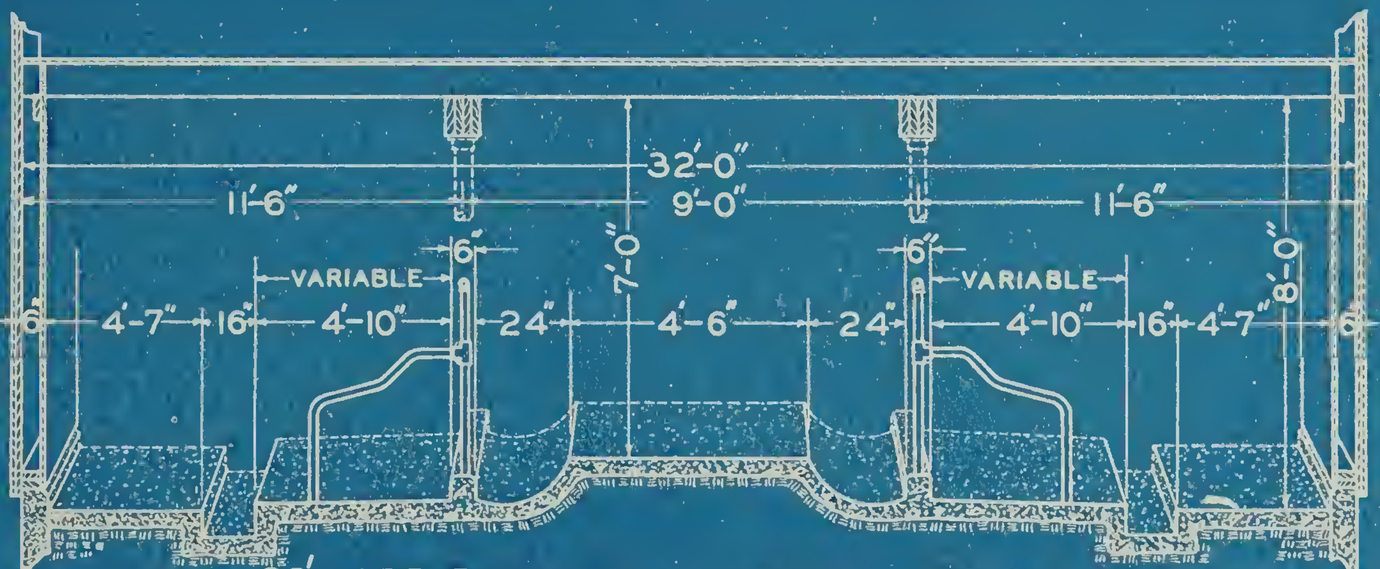
Suggested Standards



36' WIDE BARN



34' WIDE BARN



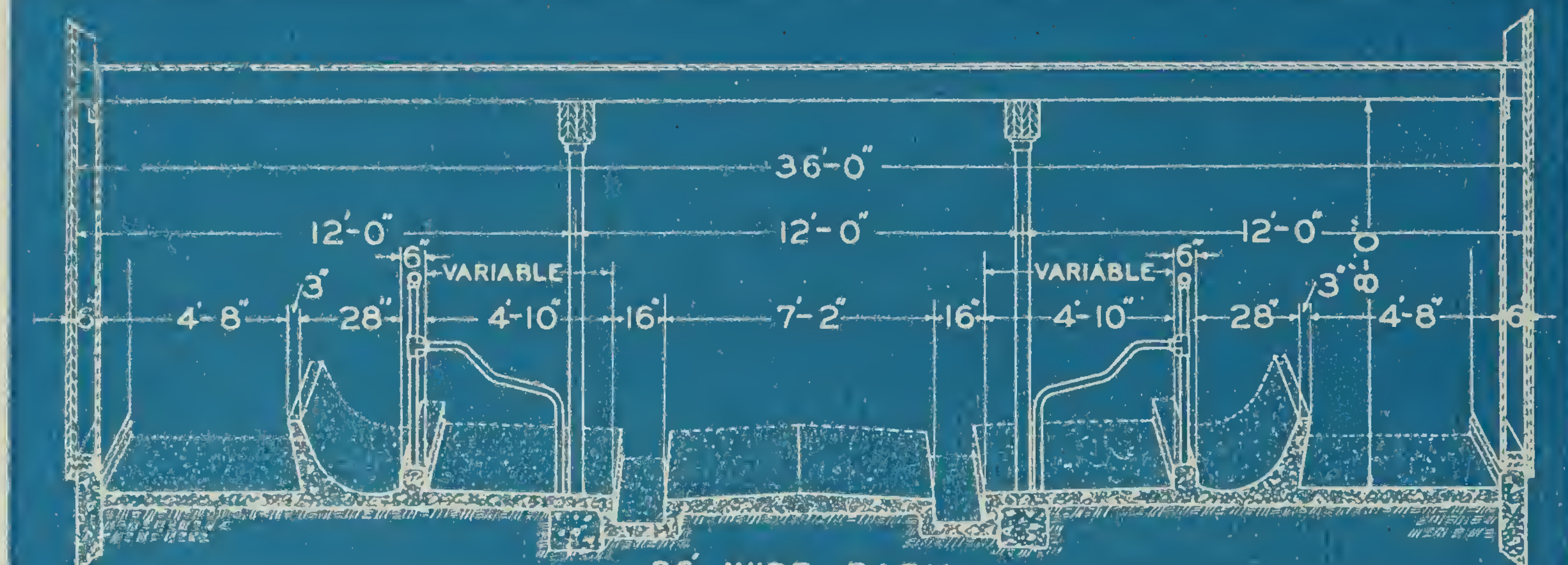
32' WIDE BARN WITH RAISED FEED ALLEY

For Cows Facing In

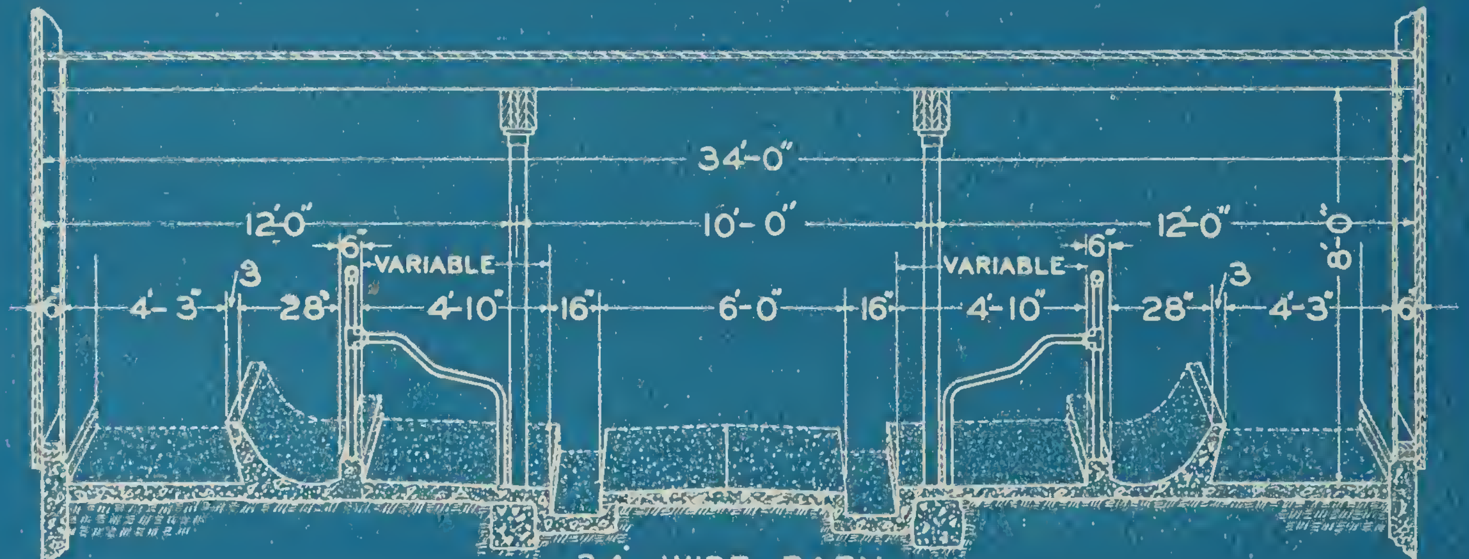
These cross section details are offered to assist you in deciding the width of your stable. Keep in mind stall platforms may vary from 4′ 6″ for small cows to 5′ 2″ for very large cows. To make a plan first draw out on paper the stable arrangement as you believe would suit you best, keeping in mind that saving time in caring for cows is highly important. Errors in your pencil plan can be changed without cost whereas when under construction changes may not be possible, or at any rate are costly.

STABLE MEASUREMENTS

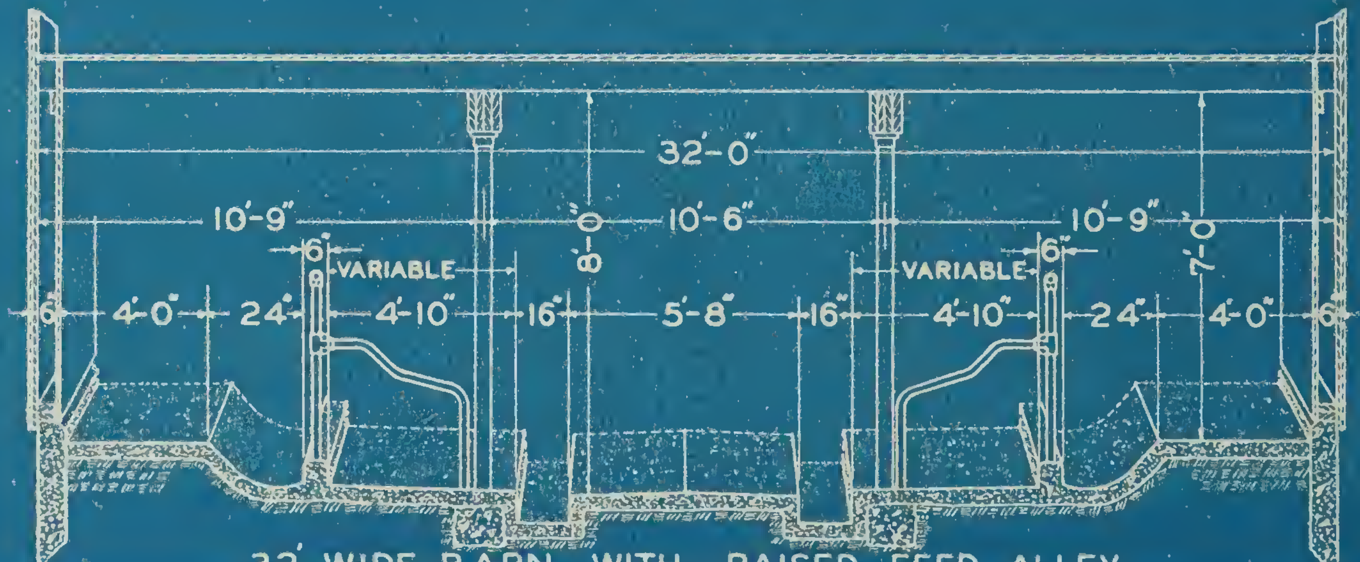
Suggested Standards



36' WIDE BARN



34' WIDE BARN



32' WIDE BARN WITH RAISED FEED ALLEY

Cows Facing Out

When you have your pencil plan completed submit it to us for suggestions. One suggestion from our barn engineers alone may be a real time and labor saver for you.

Planning Barns is our everyday business. 32 years experience will assure you a stable plan arranged for proper distribution of light, more effective, greater cow comfort and cow cleanliness, greatest ease in doing chores and to save time.

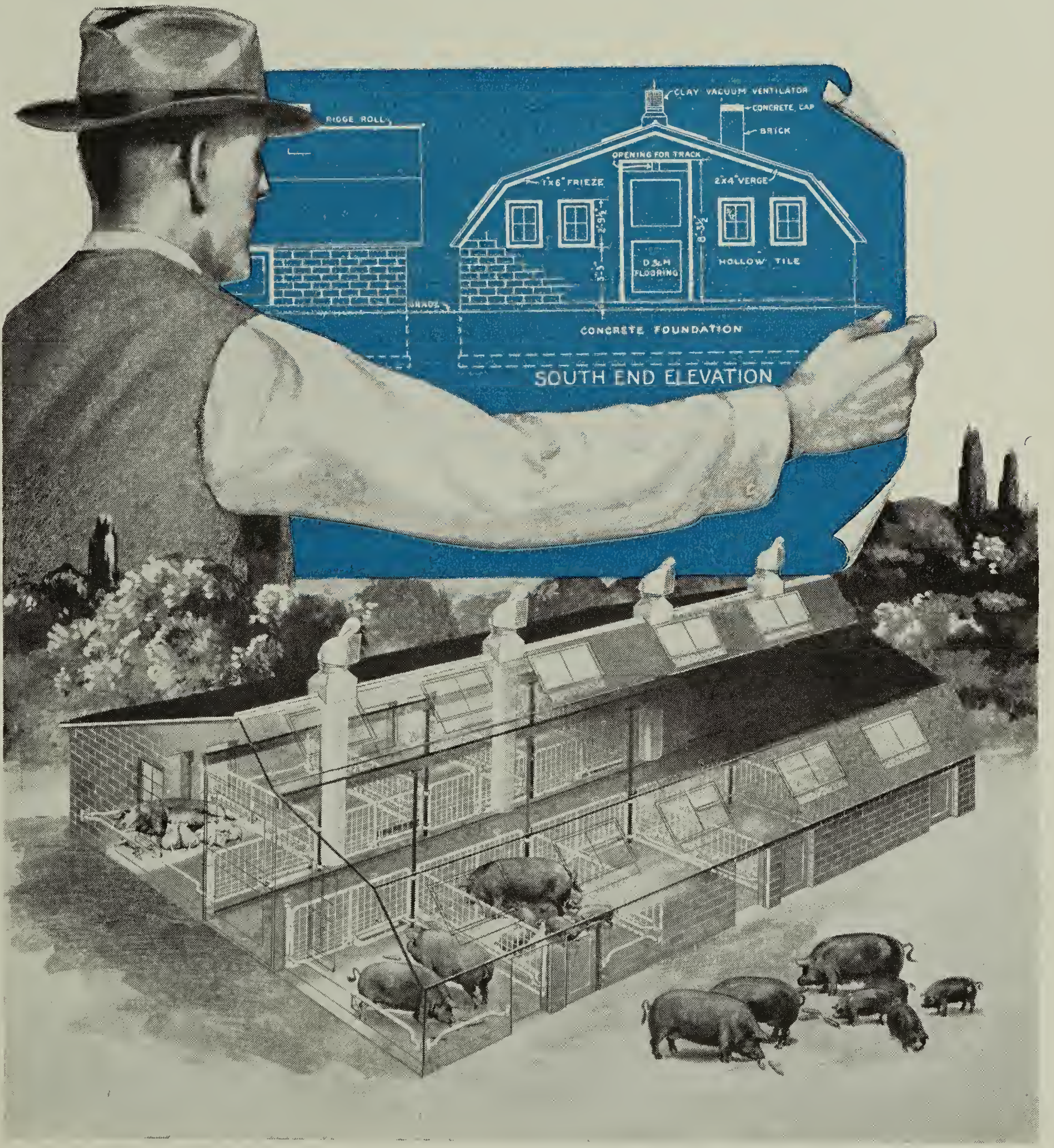
All these, yet not have it cost a cent more than necessary to secure those vital essentials for profitable results.

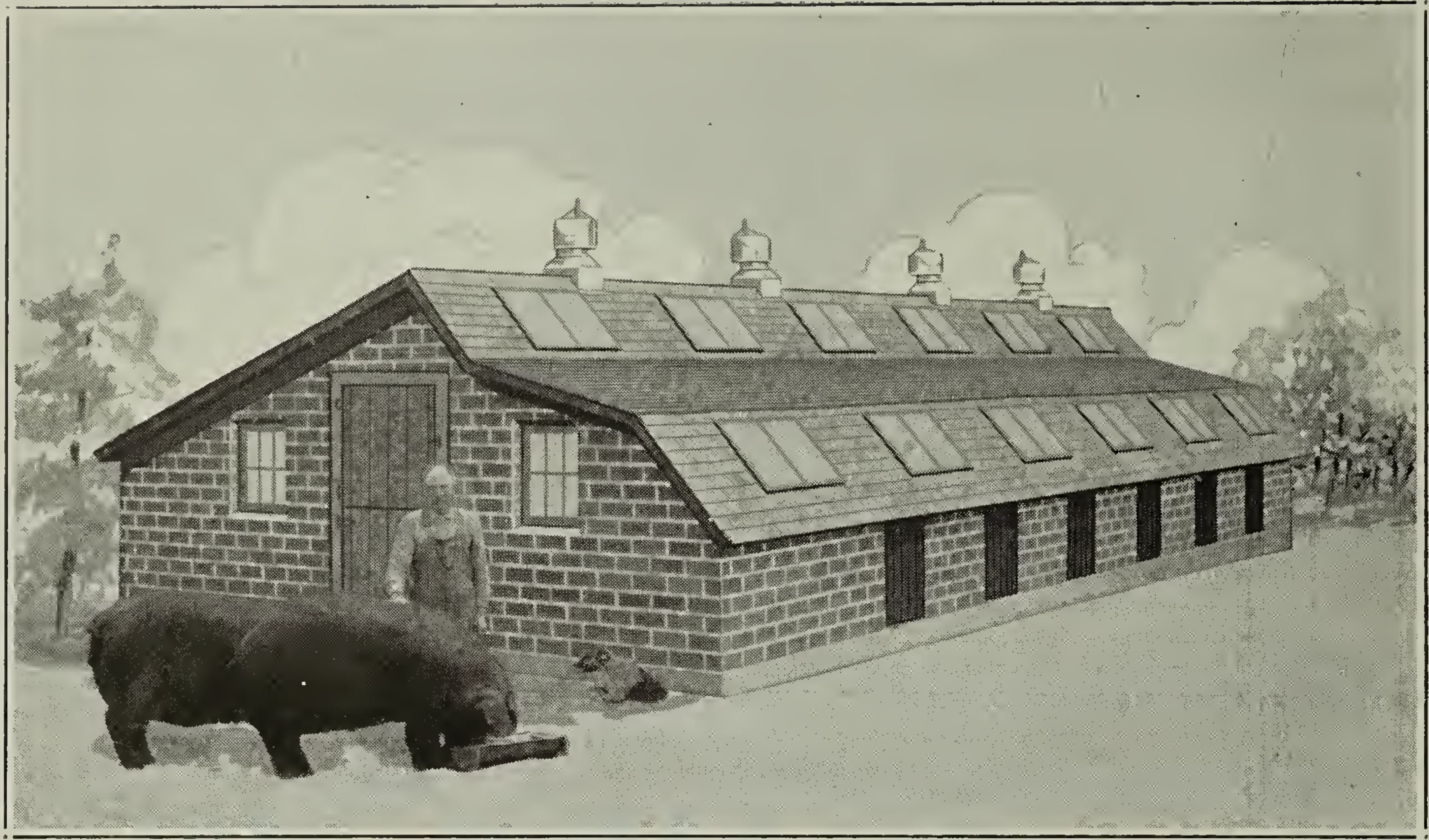
Hog Houses That Pay Profits

BUILD wisely and you will reap generous profits. No man can expect to make a money-making, money-saving swine barn out of an unplanned, thoughtlessly conceived and built shed. Remember that results, not the price paid for the building, is the important factor. After the house is up it is just beginning either to make money for you or to take money from you.

On too many farms in this country pigs are looked upon as unclean animals, that prefer dark, smelly, unsanitary hovels to bright, clean, sunshiny quarters. Unclean animals that can get along somehow in spite of neglect and abuse.

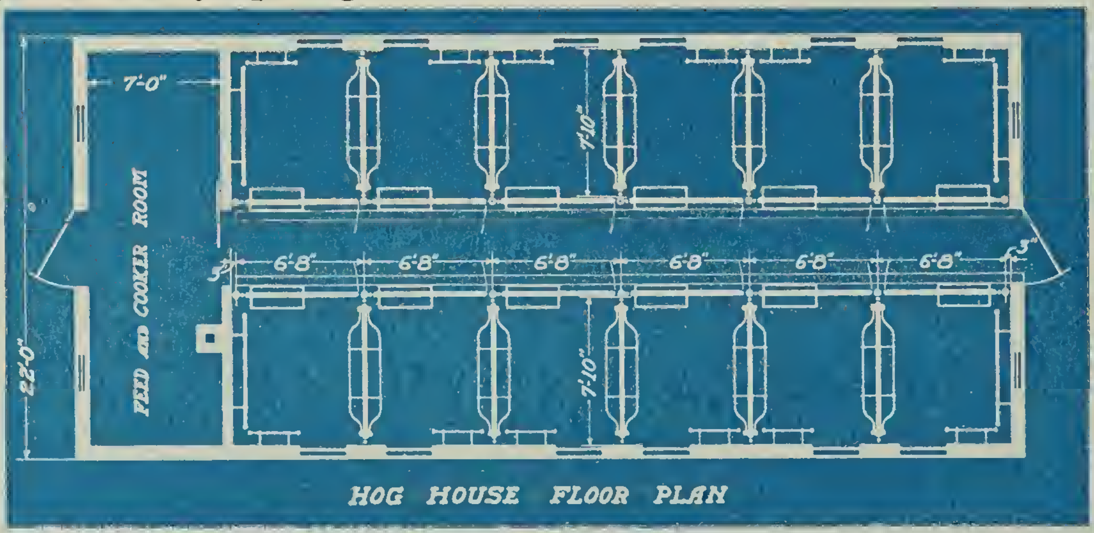
On those farms it is little wonder that hogs return no profit.



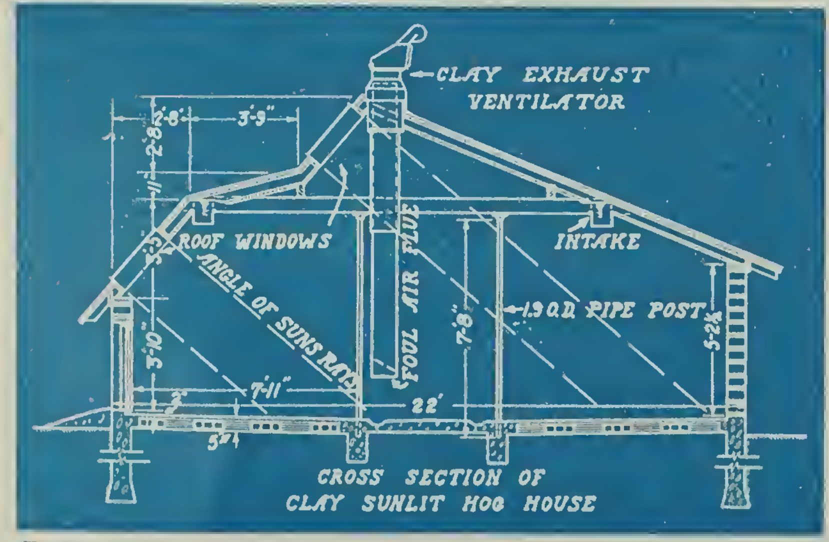


"Sunlit" Hog House Nos. 1622 and 1624

All of these plans are so arranged that you can build any length desired from them. There is a peculiar advantage of having roof windows on the south roof of a hog house standing east and west as compared to sunlight thru windows of a hog house running north and south. In the latter, because of the low angle of light, you get the least heat and light in early spring and the most in mid-summer when you don't want it. In this "Sunlit" plan you get the most light in early spring and less in the hot summer.



HOG HOUSE FLOOR PLAN

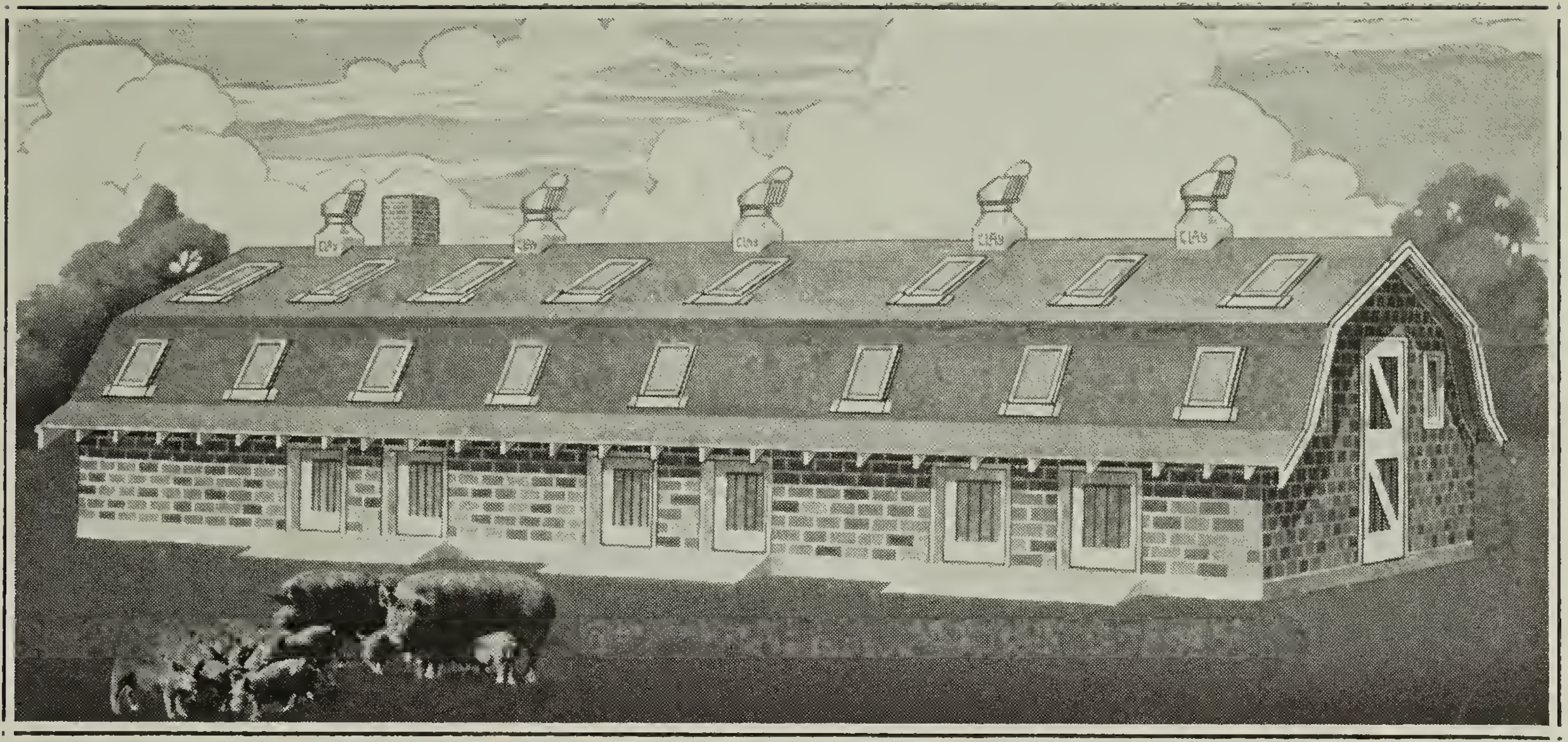


CROSS SECTION OF CLAY SUNLIT HOG HOUSE

1622—22 ft. wide ..	**$2.00**
1624—24 ft. wide ..	**2.00**

Includes floor plan, building details, roof details, wall construction, end elevation and side elevation.

Same plans can be used for wood or tile walls.



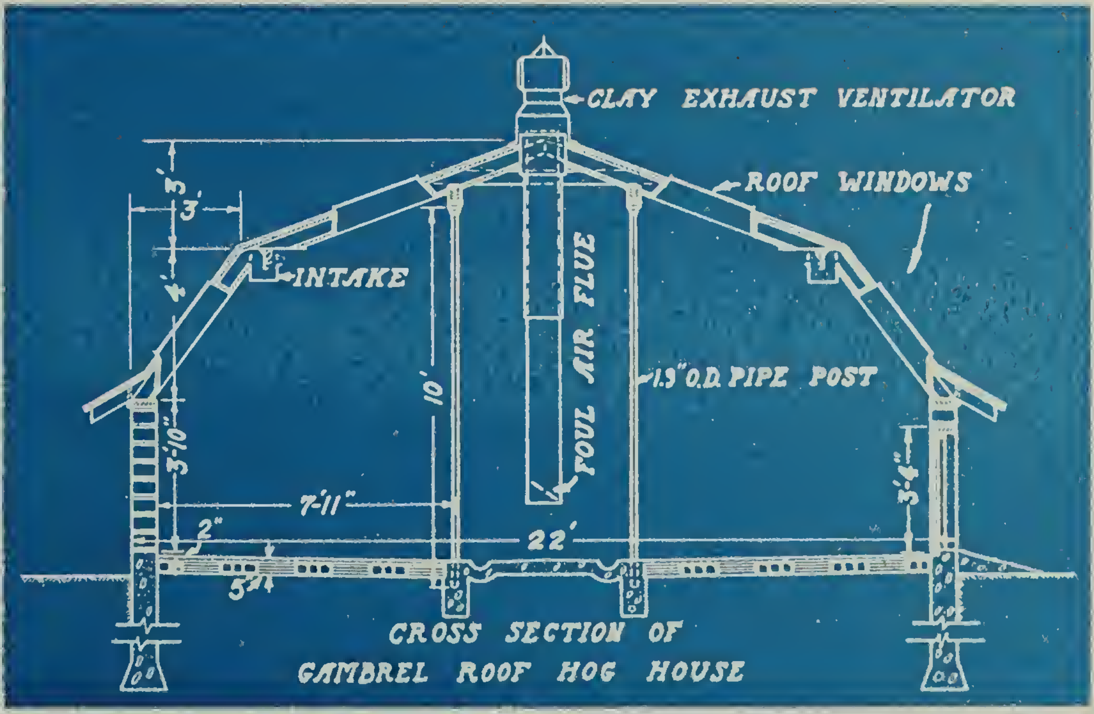
Gambrel Roof Hog House Nos. 1522 and 1524

Just how quickly a new hog house will pay for itself and return a handsome profit is largely up to the owner before he builds it. Frankly, it is as easy to build a profit-making swine barn as it is to build one that absorbs profits year in and year out. Obviously, it is wisest to build from plans that have proven most profitable for others.

It stands to reason that the thoughtful farmer who plans his hog house to embody those profit producing factors and then builds and equips it accordingly stands a far better chance of getting the greatest possible return.

A man can live in a poorly arranged home for years and suffer only personal discomfort, but he can't work and raise hogs in a poorly constructed hog house a single season without paying for it in money.

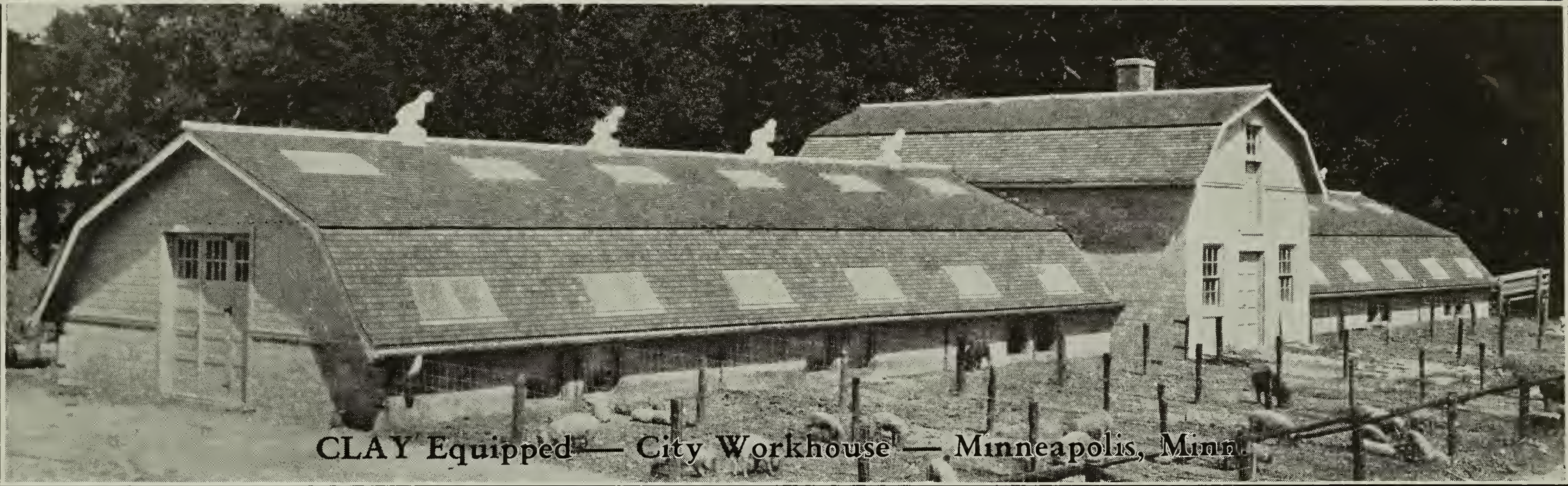
Before you build, reckon the cost not merely the price you intend to pay. Price is not cost. Price is what you pay as soon as you haul out the materials. Cost is the difference between what you put into your hog house, in money, time and labor day after day, and what you get out of it in money, in time saved and labor saved. That's what decides your profits or losses.



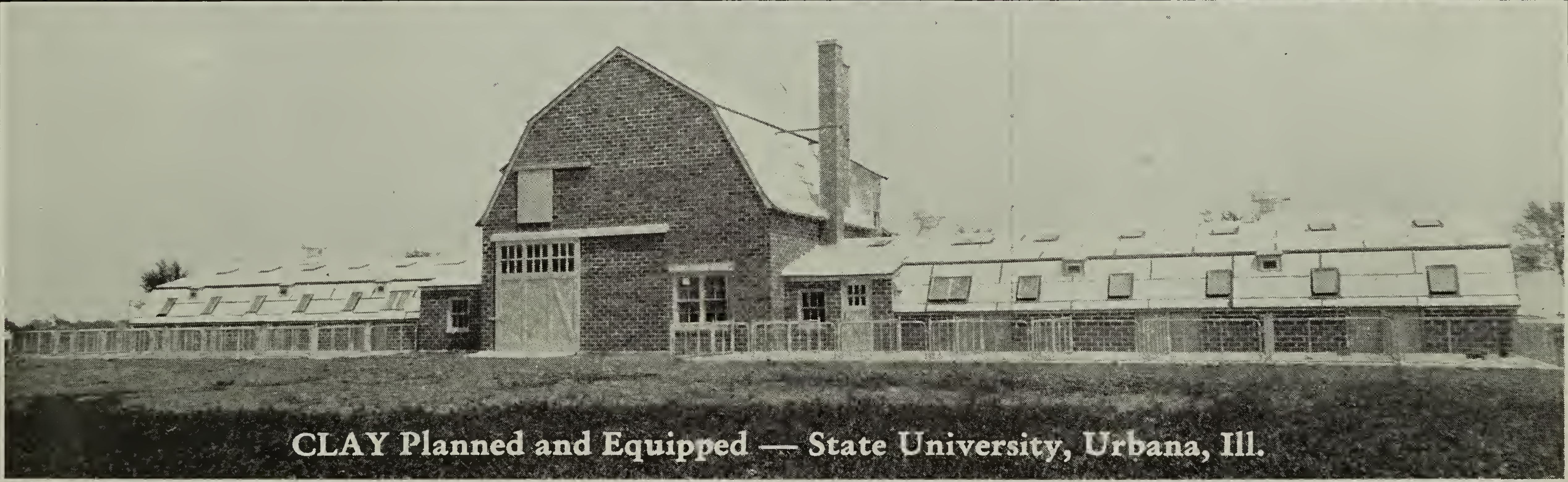
1522—22 ft.	**$2.00**
1524—24 ft.	**2.00**

Includes floor plan, building details, roof details, wall and foundation, end and side elevation.

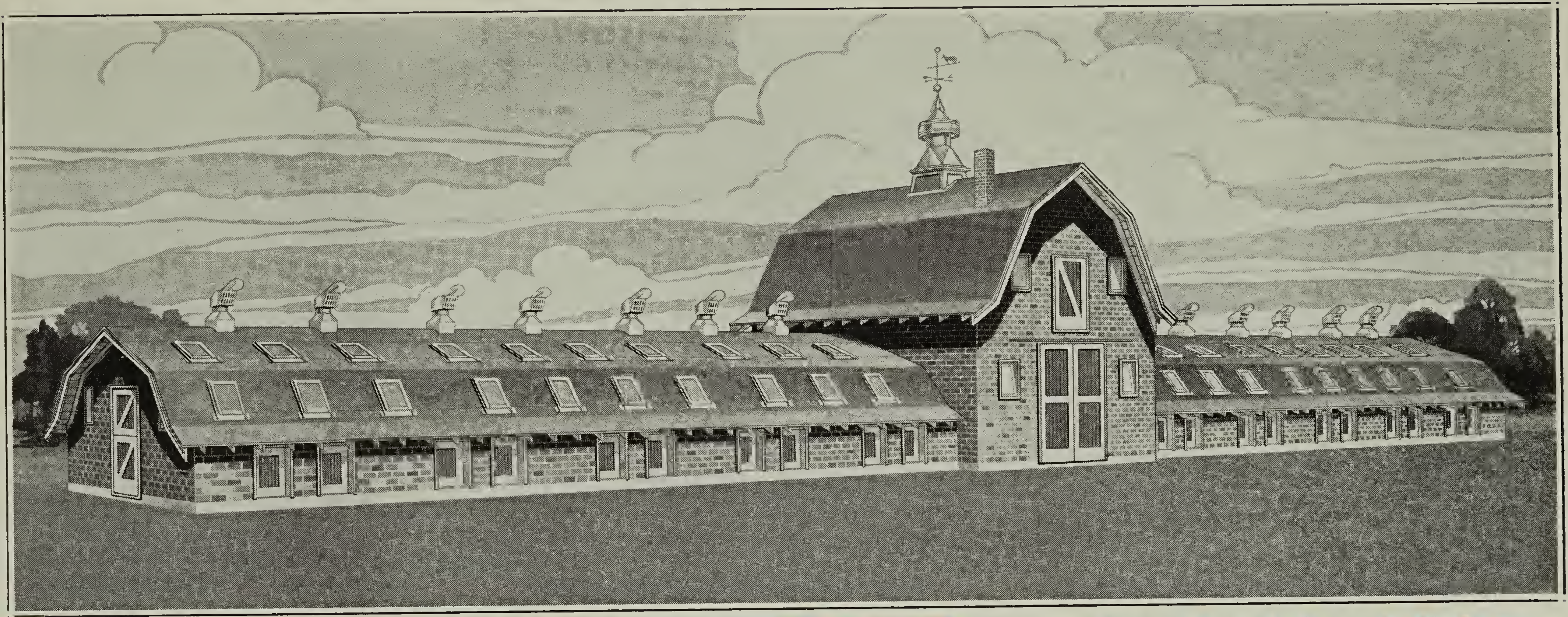
Same plans can be used for wood or tile walls.

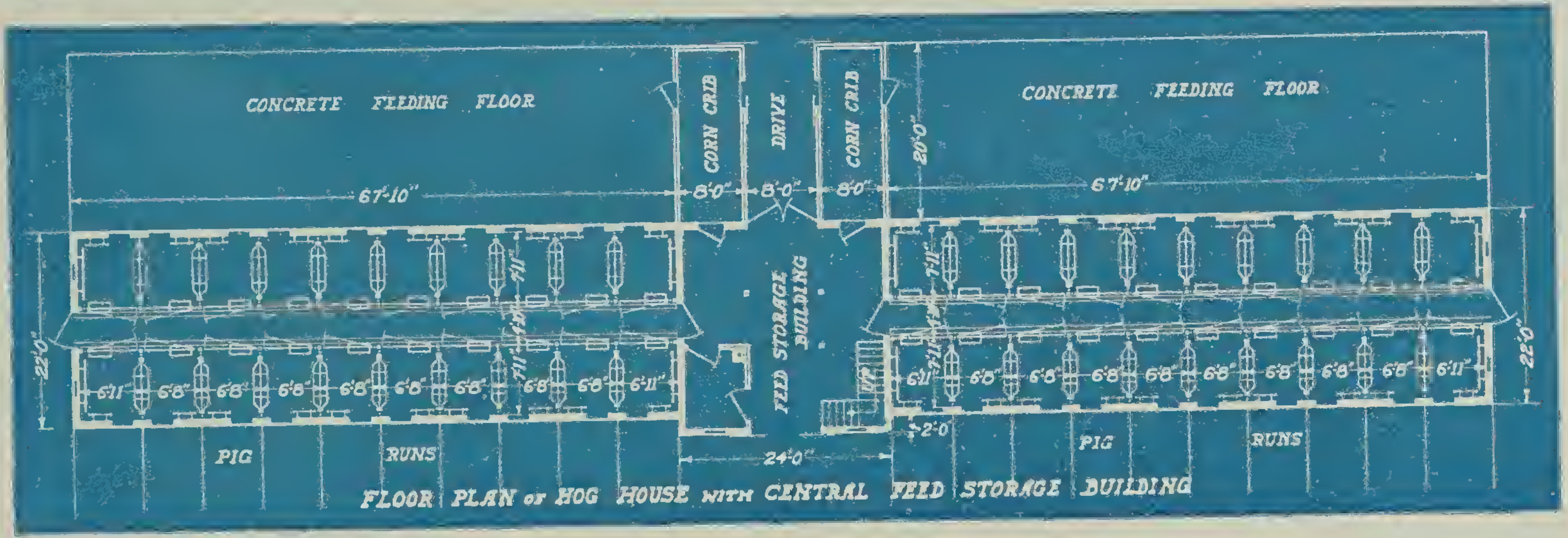


CLAY Equipped — City Workhouse — Minneapolis, Minn.



CLAY Planned and Equipped — State University, Urbana, Ill.





Gambrel Roof With Central Feed Building

It is not what a hog house costs, but what it saves, that counts; not what you pay for it, but what you get out of it, not what you spend for it but what it earns for you.

F1522—*22′* wide **$7.00**

Floor plan, cross section elevation, side elevation, end elevation.

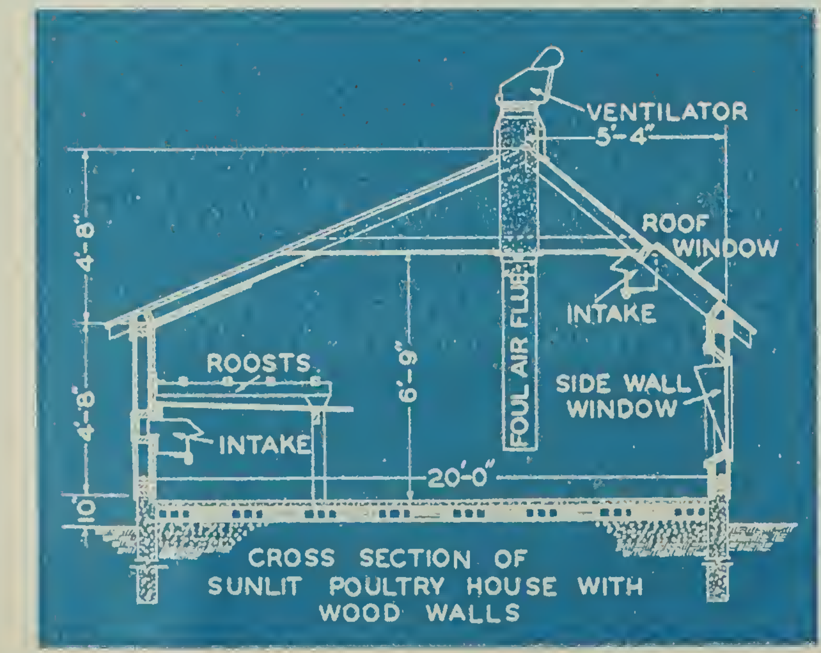
For Winter Eggs Build for Spring Conditions

"Sunlit" Poultry House No. 920

To get profitable winter eggs you must duplicate as nearly as possible the warm, clean, healthful condition which nature supplies in the Spring time.

A warm house, plenty of pure, fresh air and sunlight makes hens active layers. Conditions inside the CLAY "SUNLIT" house are so nearly like spring conditions that hens are healthy, alert and free from disease.

A hen house to give satisfactory results need not be fancy or elaborate. But build a comfortable house. There is nothing that will pay better than comfort for the hens. You can't expect a hen to stand around all humped up with the cold, and lay eggs. The house should be arranged so that it will allow plenty of sunshine, also plenty of fresh air without drafts. If these essentials are not provided your house will get damp and cause sickness.

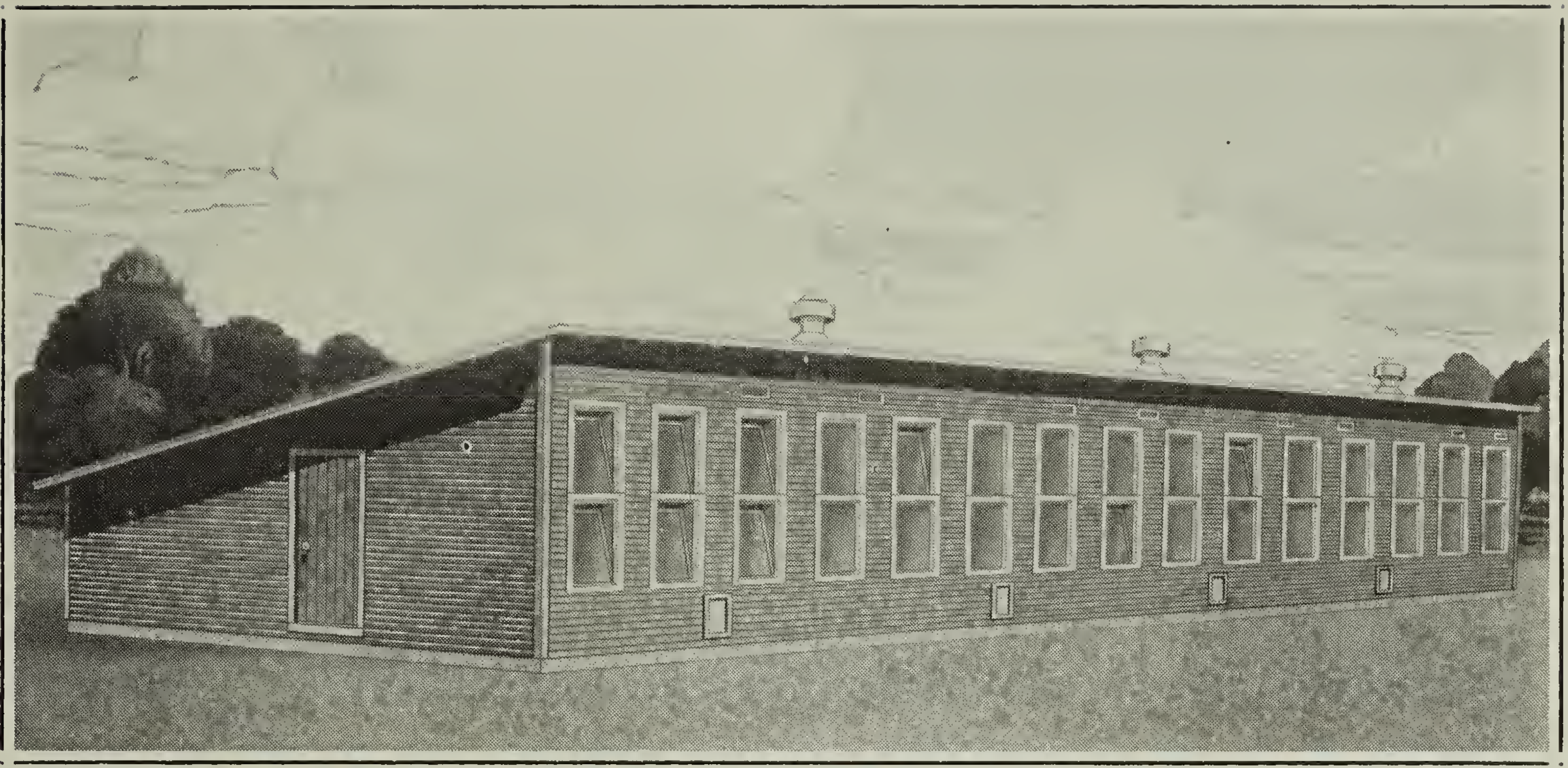


CROSS SECTION OF SUNLIT POULTRY HOUSE WITH WOOD WALLS

Standard Blue Prints Show Construction For Wood and Tile Walls

916	— 16 ft. wide	**$2.00**
918	— 18 ft. wide	**2.00**
920	— 20 ft. wide	**2.00**

Includes floor plan, building details, roof details, wall construction, end elevation and side elevation.



Clay Shed Type House No. 820

This type of poultry house is very simple and inexpensive to build. Faced to the South it benefits fully of winter sun. Provides quarters where layers will maintain most active production when egg prices are highest.

Indeed, if a man is going to keep hens at all he should keep them in a warm healthful house. If he starts out with the right kind of a house he removes from his path a large number of the causes of failure among poultry raisers.

Remember this about a ventilated house. A house constantly supplied with good circulation of clean air, maintains a high degree of air purity and dryness. The dozens of extra eggs each hen will lay quickly pays for a ventilation system.

December 29, 1927.

Clay Equipment Corp.
Cedar Falls, Iowa.

Dear Sirs: Two years ago I moved here and built myself a modern laying house. Installed eight of your CLAY Ventilators. In one year I paid off all my buildings and tools with eggs and birds I sold. I claim it was good CLAY Ventilation along with constant attention that paid off my debt. I had no money and all was done on credit. Through me several others bought ventilators.

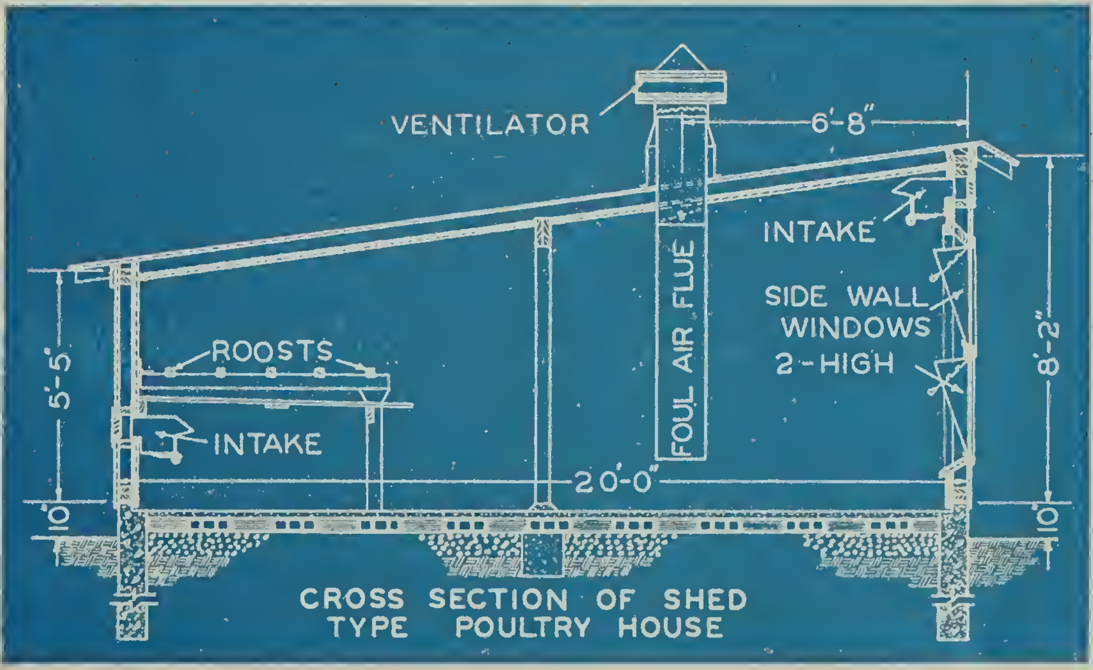
I remain yours respectfully,

James Garland,
Balmacaan Poultry Farm,
Hartford, Mich.

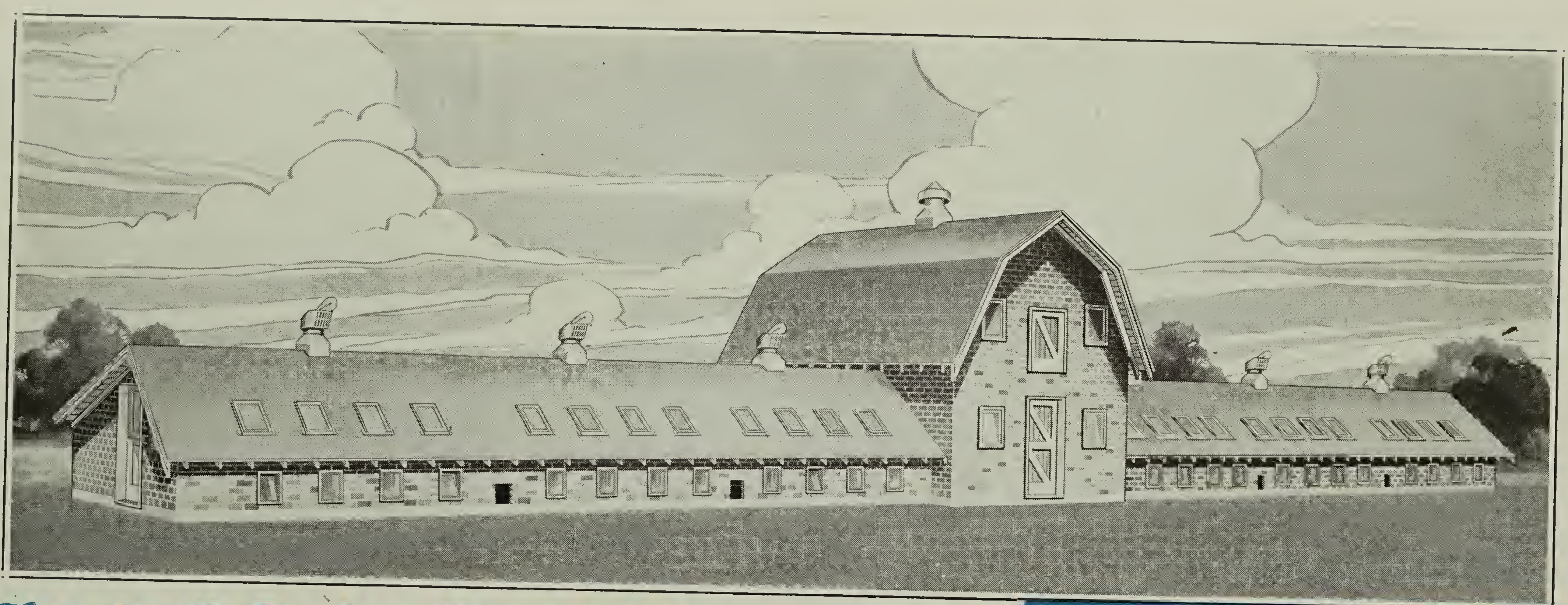
Standard Blue Prints Show Construction Both For Wood and Tile Walls

816—16 ft. wide	**$2.00**
818—18 ft. wide	**2.00**
820—20 ft. wide	**2.00**
F820—20 ft. wide with large central feed house	**3.50**

We can supply you complete ventilating system to fit this building. If even temperature, clean fresh air, dry litter will just increase your winter egg production 3 eggs per bird each season you make 35% on the money you invest in ventilation.



CROSS SECTION OF SHED TYPE POULTRY HOUSE



Clay Sunlit Poultry House with Central Feed Storage

The CLAY Sunlit House has the complete approval of many large poultrymen. This type of house has features that appeal to the practical poultry raiser.

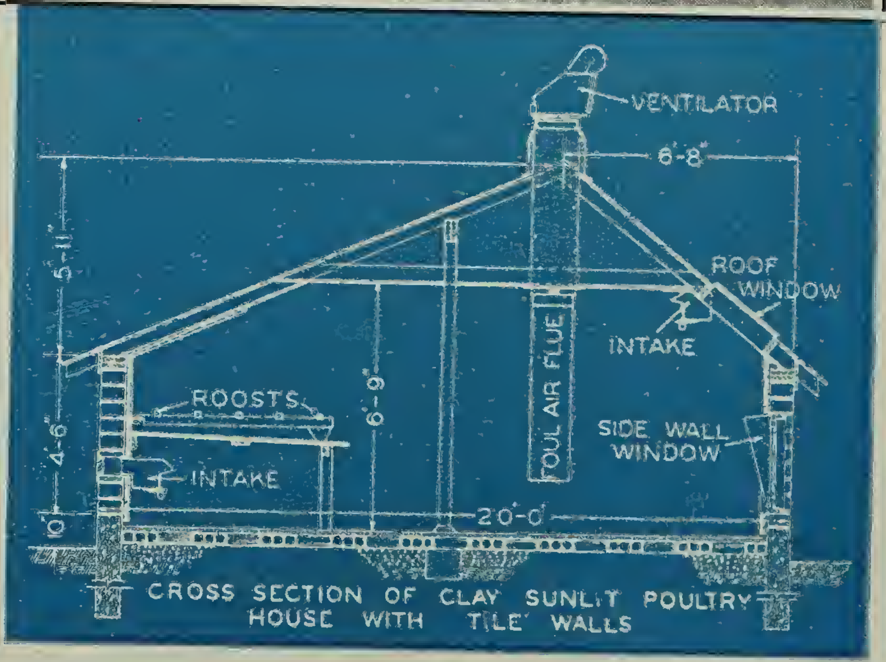
With a row of roof windows and an equal number of side wall windows sunlight streams over a large area of floor space. A wide unbroken band of light the full length of the house. The cubical contents of building is less per bird due to low walls and ceiling construction. No waste area to consume animal heat.

Both For Wood and Tile Walls

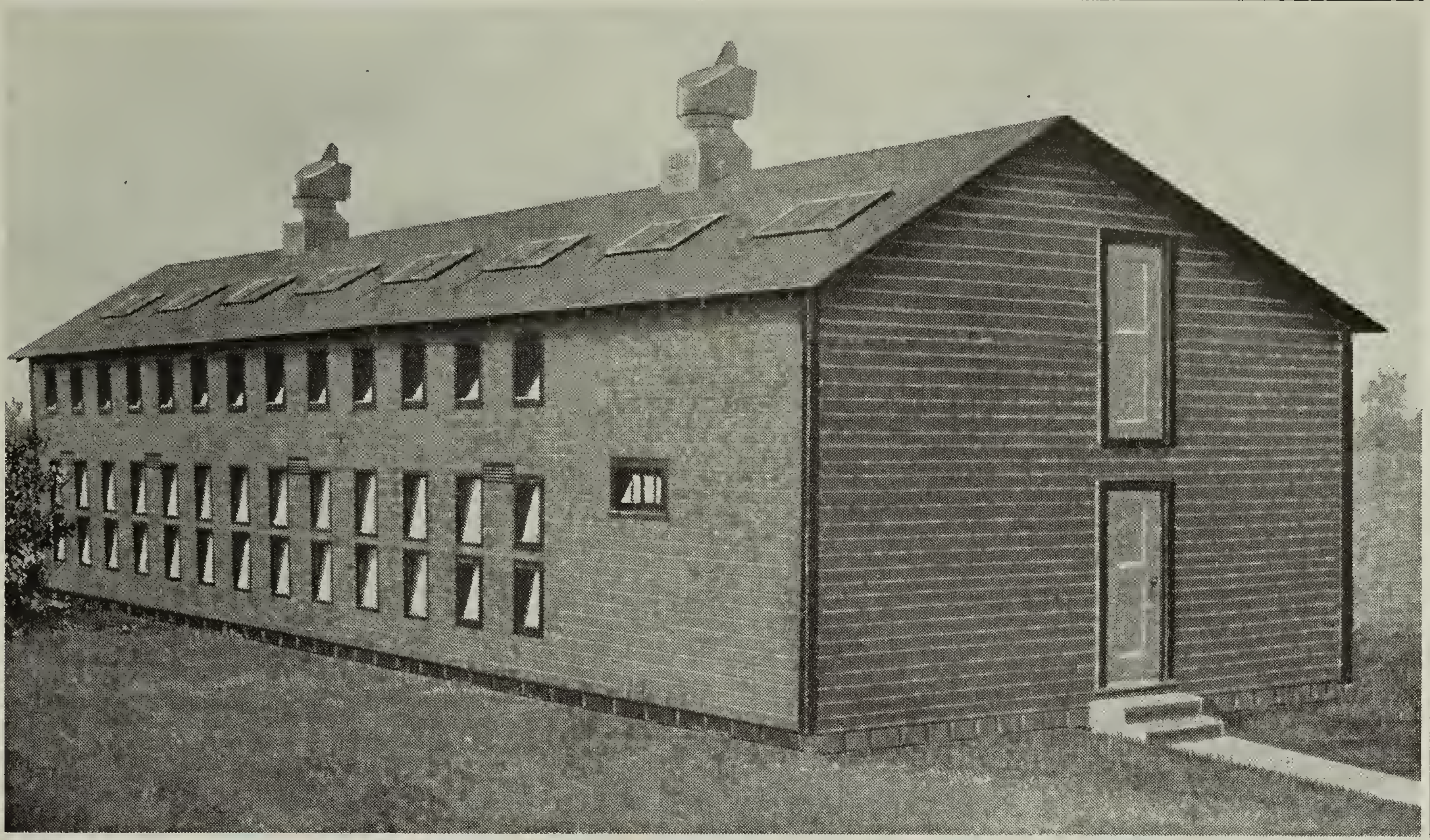
F920 — 20′ . . . **$5.00**

Plans for this house 18 ft. wide can be supplied, same cost.

Includes floor plan, building details, roof details, wall construction, end elevation and side elevation.



CROSS SECTION OF CLAY SUNLIT POULTRY HOUSE WITH TILE WALLS



Clay Two-Story Sunlit Poultry House

This double story house is a great favorite with poultrymen who operate on a large scale and where acreage is at a premium. It offers economy in construction. The building cost per bird is materially less since one foundation and roof serve the equal of a double length single story building.

Only one ground floor is necessary, which floor must be of good construction to prevent cold and dampness. The floor for the second story is of cheaper composition.

Ventilation is more effective due to higher elevation of roof ventilator beads. Longer foul air flues, provide accelerated air movement.

Roof and side wall windows are utilized to excellent advantage making for a light, cheery and cozy environment.

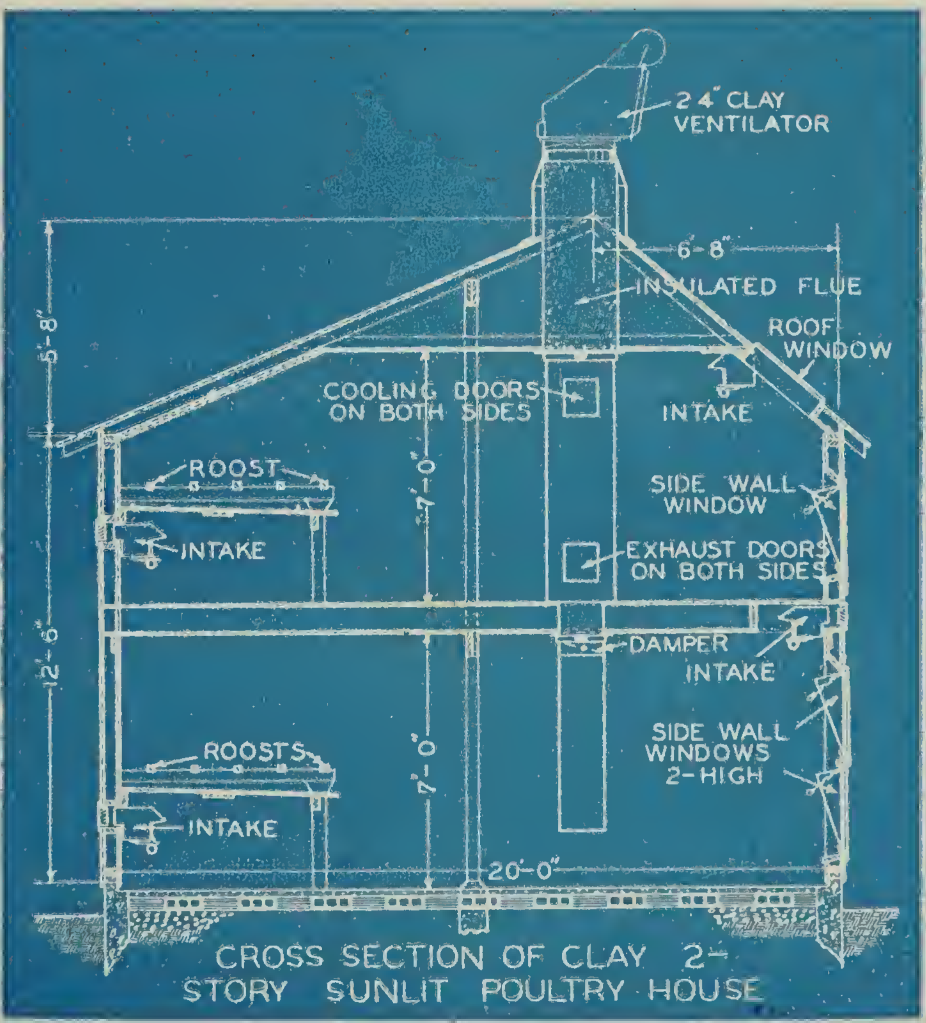
Metal ventilating side wall windows are shown in detail on pages 40 and 41. Roof windows on pages 46 and 47. Interior of this house is illustrated page 37.

PLAN

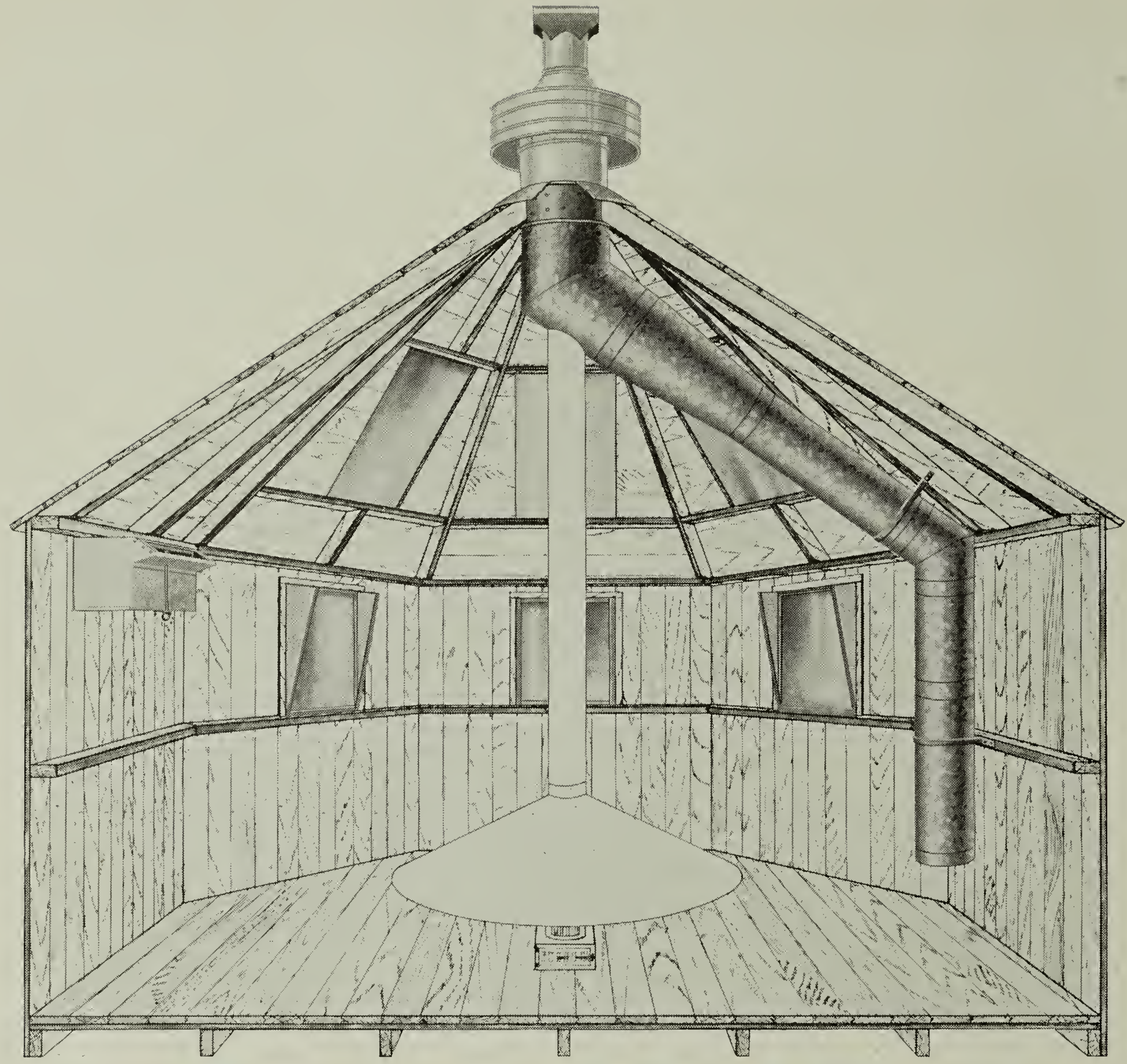
No. 2S920

$3.00

Includes floor plan, building details, roof details, wall construction, end elevation and side elevation.



CROSS SECTION OF CLAY 2-STORY SUNLIT POULTRY HOUSE



Clay Octagon and Shed Brooders

Blue print plans of Octagon Brooder House shown above and shed type below have been carefully prepared to enable you to build a brooder of desirable style and size to accommodate your needs. These are complete working plans.

Although various shaped houses are offered on the market, careful study on our part as to proper design and construction leads us to the definite recommendation of the octagon and shed type as the most practical. Side wall windows see pages 40-41. Roof windows see pages 47-48.

Sizes

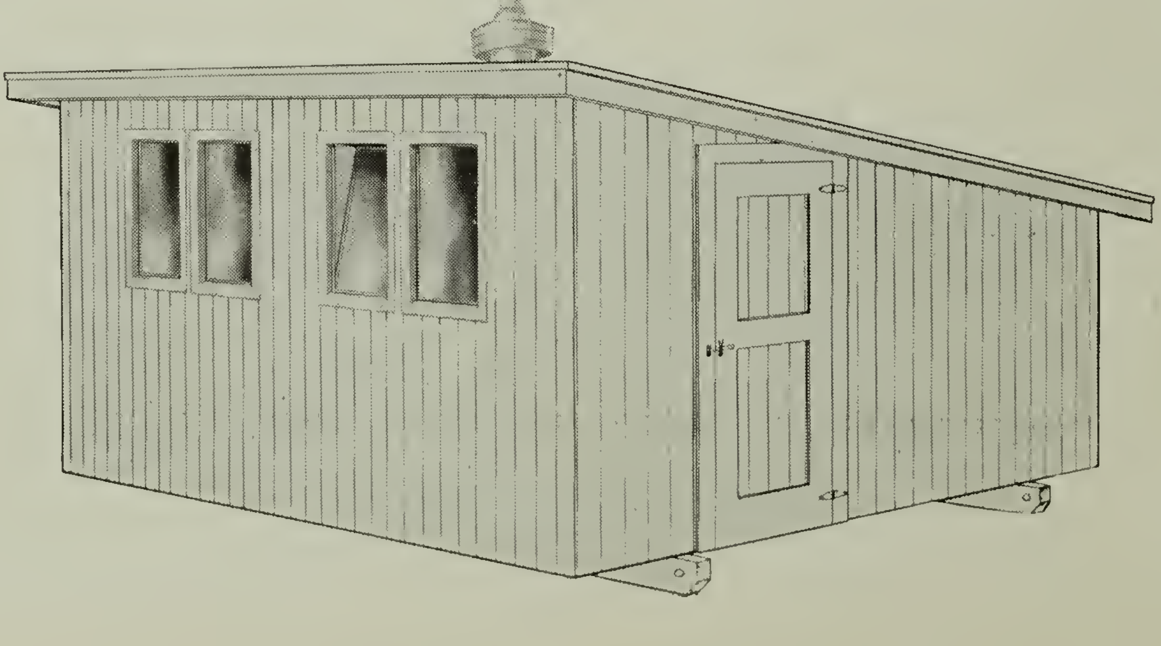
Octagon

OB8—8 ft.
OB10—10 ft.
OB12—12 ft.

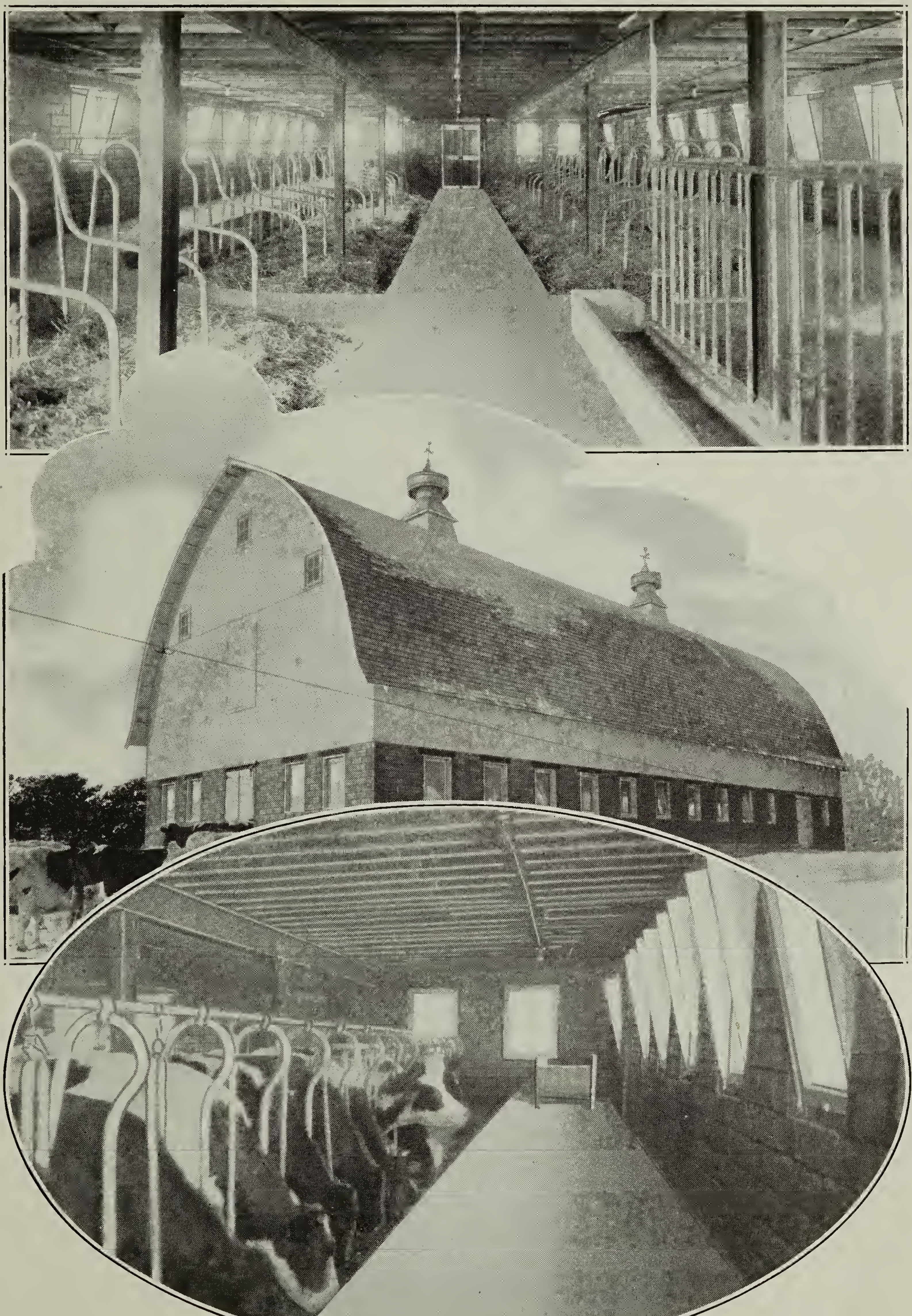
Shed

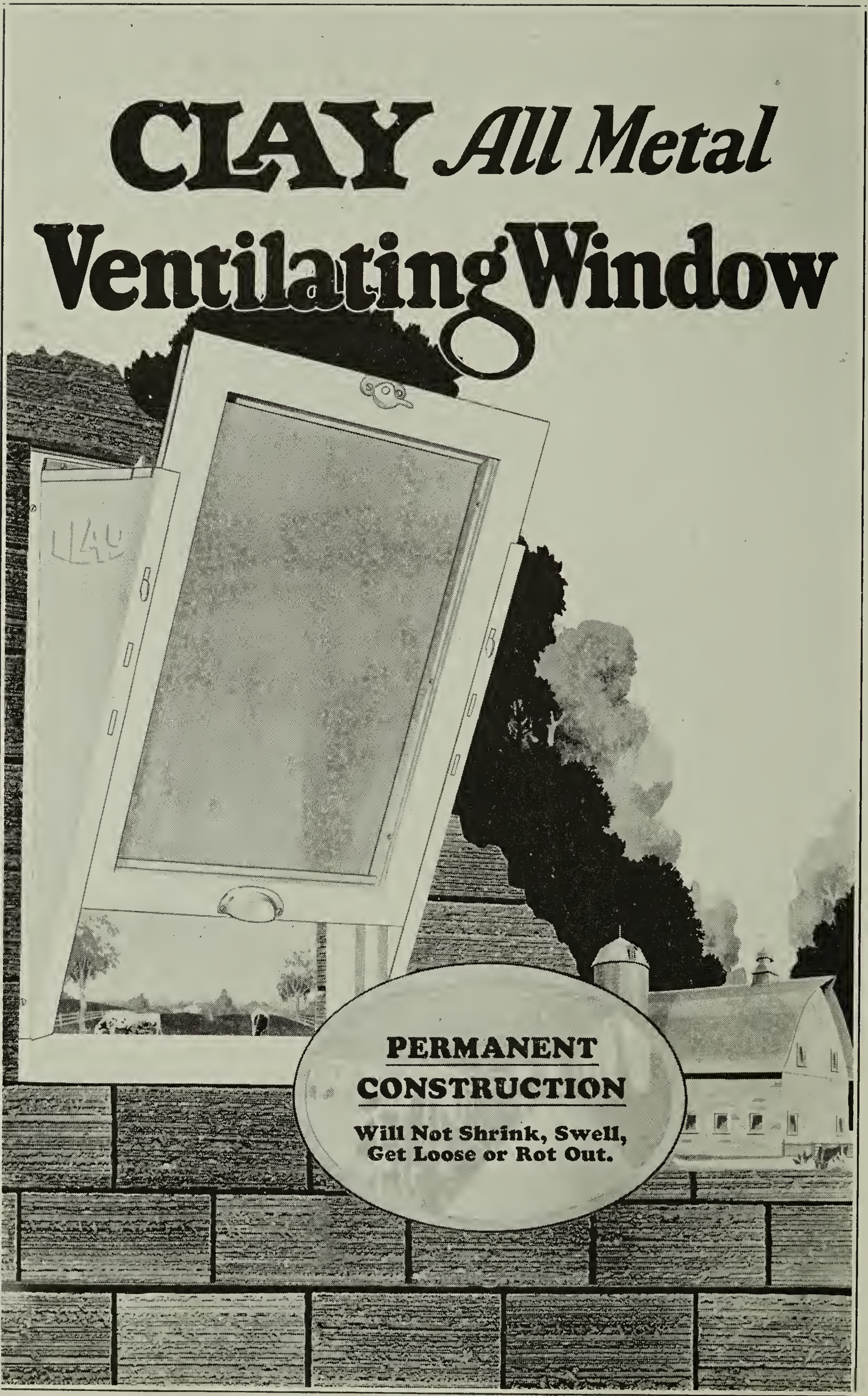
SB12-14 — 12 ft. by 14 ft.

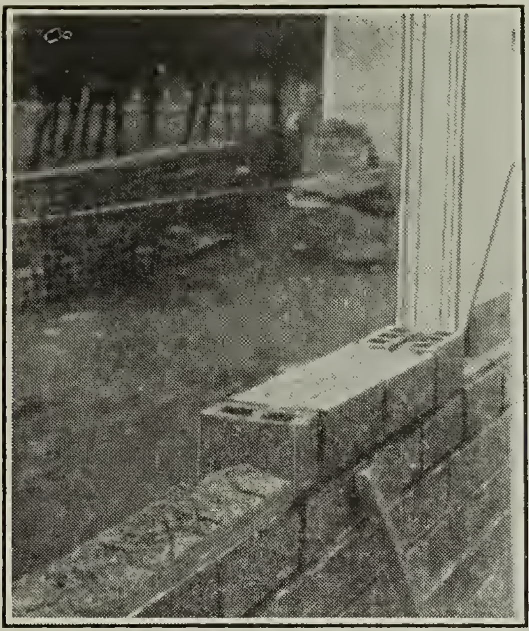
PLANS FREE
If you give name of your dealer.

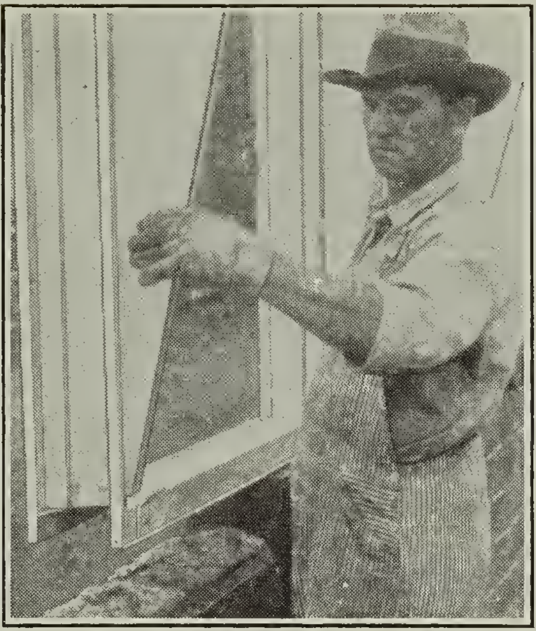


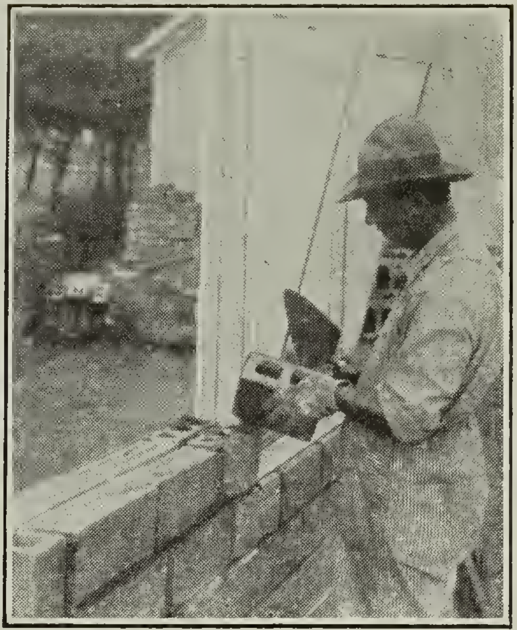
Clay Windows Spread the Light Throughout the Entire Stable

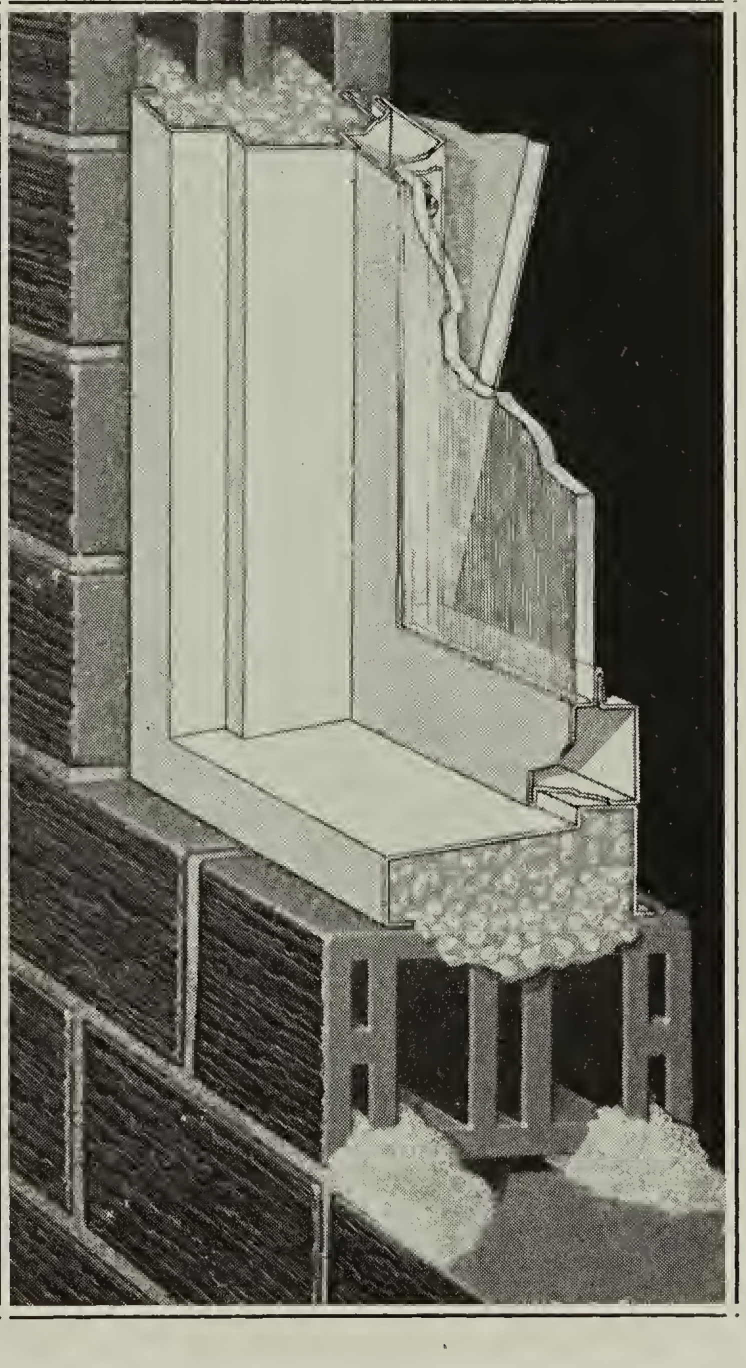



CLAY All Metal
Ventilating Window
CLAY
PERMANENT
CONSTRUCTION
Will Not Shrink, Swell,
Get Loose or Rot Out.









THE above illustrations clearly show the mortar laid, enough to entirely fill the bottom of the channeled frame.

The frame is then forced down into this mortar. Next tile is laid on each side of frame, the mason filling the channel of steel frame with mortar, which ties into tile cells and the mortar joints, thus making the steel frame an integral part of the wall itself.

Having the cement mortar, filled around frame makes a permanent installation. Window will never rot out, it never requires refinishing. Being permanent and fire proof this window is particularly appropriate for masonry and hollow tile buildings. The joints between the frame and the masonry construction are absolutely tight.

As both the sash and frame are steel they will never shrink, warp, or dry out. These features permit us to manufacture the window a tight fit. They will never get loose or get stuck. Besides, the sash has an extra lap onto the frame different from wood sash and with a pressure latch at the top making it practically air tight.

When three or more courses of tile are above the frame no lintel is required.

SPECIFICATIONS

Frame — 24 gauge. Sash — 26 gauge, galvanized copper bearing steel. Glass — $\frac{3}{16}$″ ribbed. Finish — satin aluminum. Packed five frames and sash per crate. Glass packed twelve lights per box.

Standard List of Sizes

To fit opening when using 5″x12″ face tile.

Cat. No.	Glass Size	Glass Area in Sq. Ft.	Overall Frame Size	No. Tile Wide	No. Tile high
MW1	17 ″x24½″	2.9 ft.	24½″x33″	2	6
MW2	23⅜″x24½″	4.0 ft.	31 ″x33″	2½	6
MW3	23⅜″x30″	4.9 ft.	31 ″x38½″	2½	7
MW4	23⅜″x35½″	5.8 ft.	31 ″x44″	2½	8

Special sizes to fit other than 5″x12″ face tile can be made to order at 50c extra per window above the price of the next larger standard size in lots of 15 or more. We can supply on special order ¼″ wire ribbed glass or $\frac{3}{16}$″ crystal clear (like auto glass).

How Many Windows to Use

This table has been prepared to assist you to estimate the proper number of windows for your barn. First refer to column showing width of barn, next the column showing length of your barn. Figures shown are the number of windows to use.

Width Barn	Size Windows	LENGTH OF BARN IN FEET						
		40′	50′	60′	70′	80′	90′	100′
32	**MW1**	20	26	32	38	44	50	56
	MW2	16	20	24	28	32	36	40
	MW3	14	16	20	22	26	30	34
	MW4	12	14	16	18	22	24	26
34	**MW1**	22	28	34	40	46	52	58
	MW2	16	20	24	30	34	38	42
	MW3	14	18	20	24	26	30	34
	MW4	12	14	18	20	24	26	28
36	**MW1**	24	30	36	42	48	56	62
	MW2	18	22	26	30	36	40	44
	MW3	14	18	22	24	28	32	36
	MW4	12	16	18	22	26	28	30

Above figures are based on one square foot of glass for each twenty square feet of floor. Never use less than 1 ft. of glass to 25 ft. of floor area.

Less Windows More Light

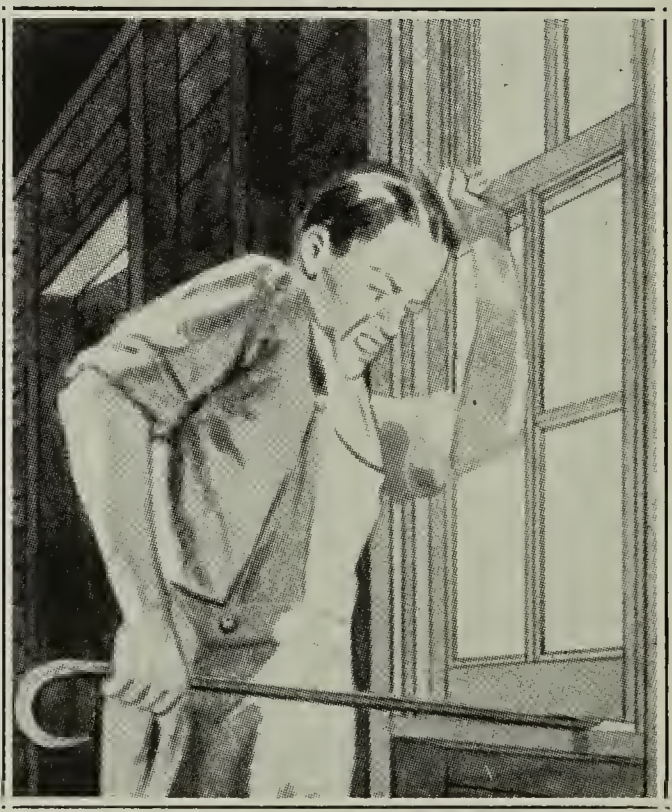
Some authorities advise 4 to 5 sq. ft. of glass for each cow. We feel this recommendation is too excessive. Ribbed glass tends to throw light farther back in the barn. Thus with CLAY windows 10% to 20% fewer windows can be used and at the same time the light conditions are actually better. Besides we should always remember that glass loses heat because of its thinness more freely than wood or masonry wall, sometimes five times as much as the wall surface.

Thus it is obvious the proper amount of light with the minimum glass area is desirable. This can best be secured with CLAY Windows.

Stop and Consider

Don't hastily assume that wood sash and frames are very much cheaper — stop a moment and figure what that construction will cost. Figure the cost of the following items:

- Lumber for Frame
- Wood Window Stops
- Nails
- Sash and Glass
- Stops and Fitting Sash
- Carpenter Labor Making Frame
- Two Coats Paint
- Labor Painting
- Hinges and Latch
- Repainting
- Metal Ventilator Wings and Fittings



Clay Metal Windows

Save glass breakage — save repainting — save refitting — don't shrink or rattle — don't swell or stick — ventilate properly — last like masonry — more light.

CLAY Ventilating Windows are complete; only one item of cost from first to last. Besides, this heavier $\frac{3}{16}$″ glass will not be easily broken. The glass spreads the sunlight in broad streams over the floor — not merely in spots.

Clay Windows Prevent Drafts

Stable windows must be opened, but cold drafts should be avoided. If you are using wood sash, provide metal wings to enable tilting sash inward so that air must travel upward to come into barn. CLAY Metal Wings are made so that windows can be tilted back allowing air to enter only at top, or during warm weather, lifted and held by metal hooks so that air may enter at both top and bottom.

Metal Wings and Parts for Wood Sash

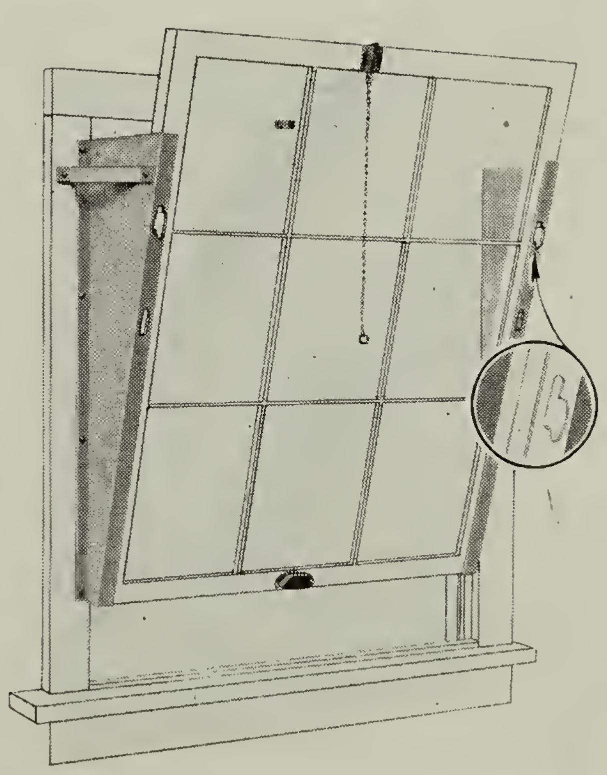
CLAY Wings for wood frames have several really worthwhile advantages.

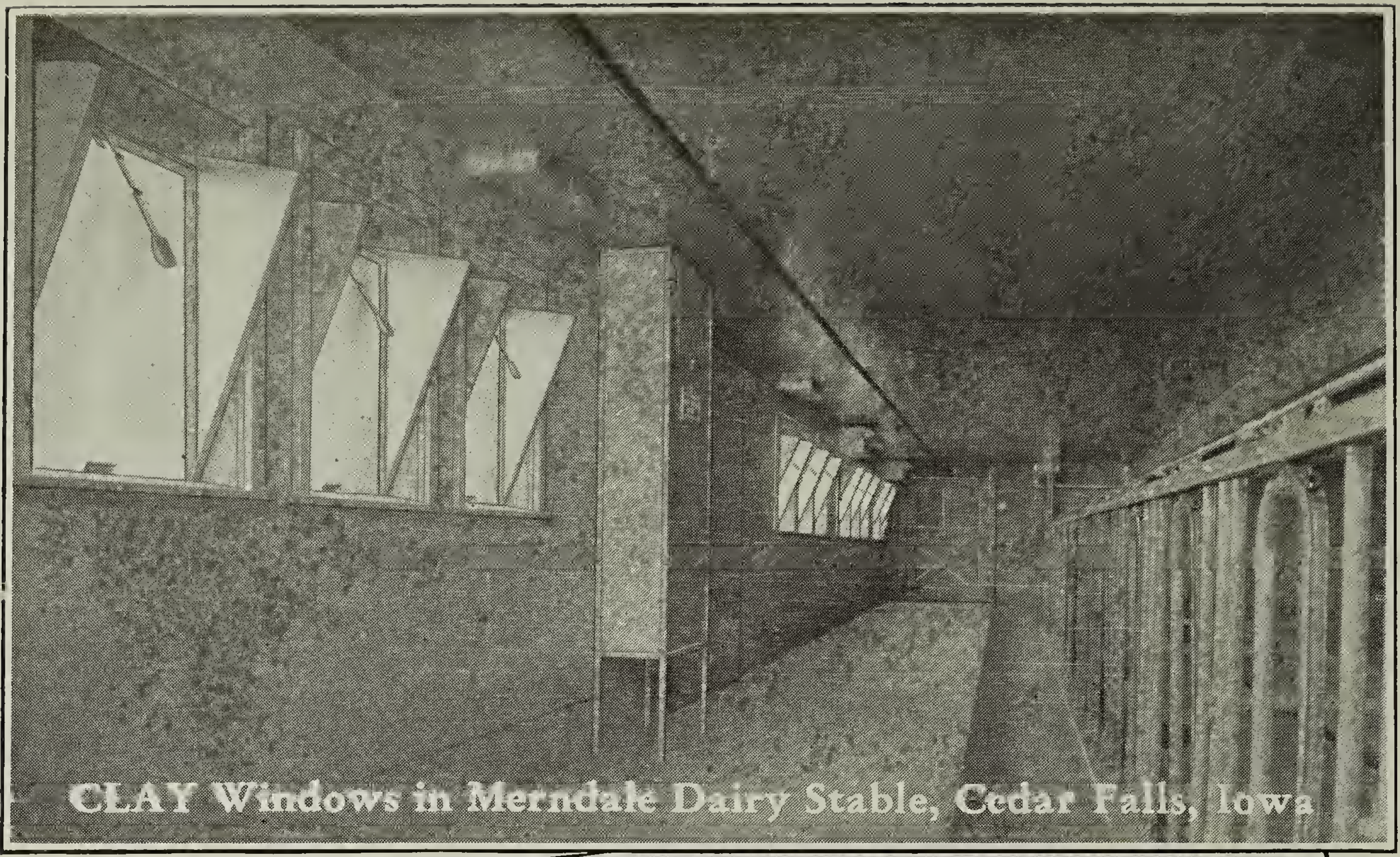
Metal hooks keep sash from rattling in the wind. Holds sash open at three elevations. Latch closes window tight. Wings are strongly braced. Finished in satin aluminum. Items include:

Two wings, 24 gauge galv. metal, 2 hook locks, 1 sash lift handle, 1 sash catch and chain, 14-1″ No. 10 R. H. screws for wings, 2-¾″ No. 10 screws for window lift, 2-3/16″x½″ F. H. Stove Bolts.

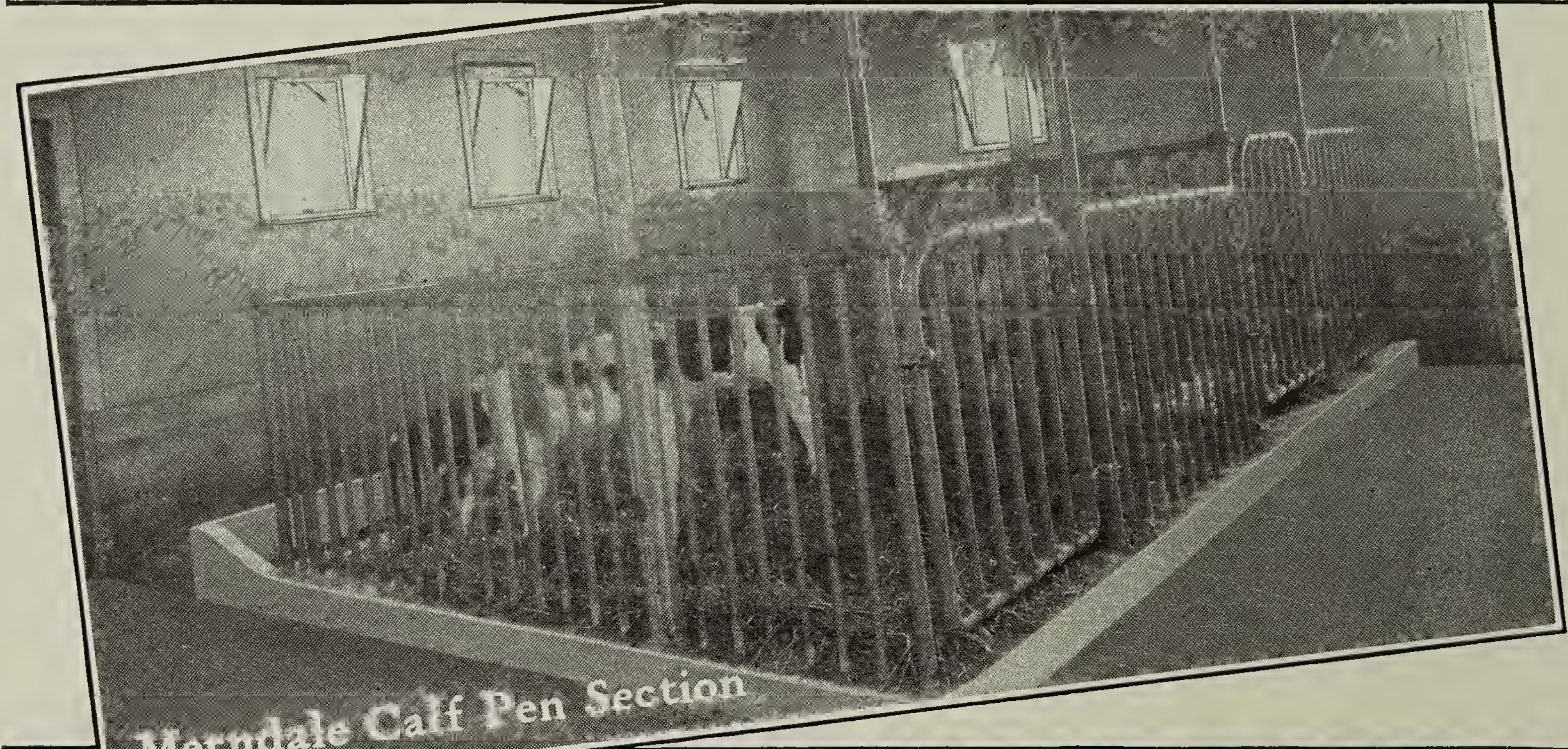
Standard Sizes

VW24	— 24″	2 lights high, 10″ or 12″ glass.
VW30	— 30″	3 lights high, 10″ glass. 2 lights high, 14″ glass.
VW36	— 36″	4 lights high, 10″ glass. 3 lights high, 12″ glass.
VW42	— 42″	4 lights high, 10″ glass. 3 lights high, 12″ glass. 3 lights high, 14″ glass.

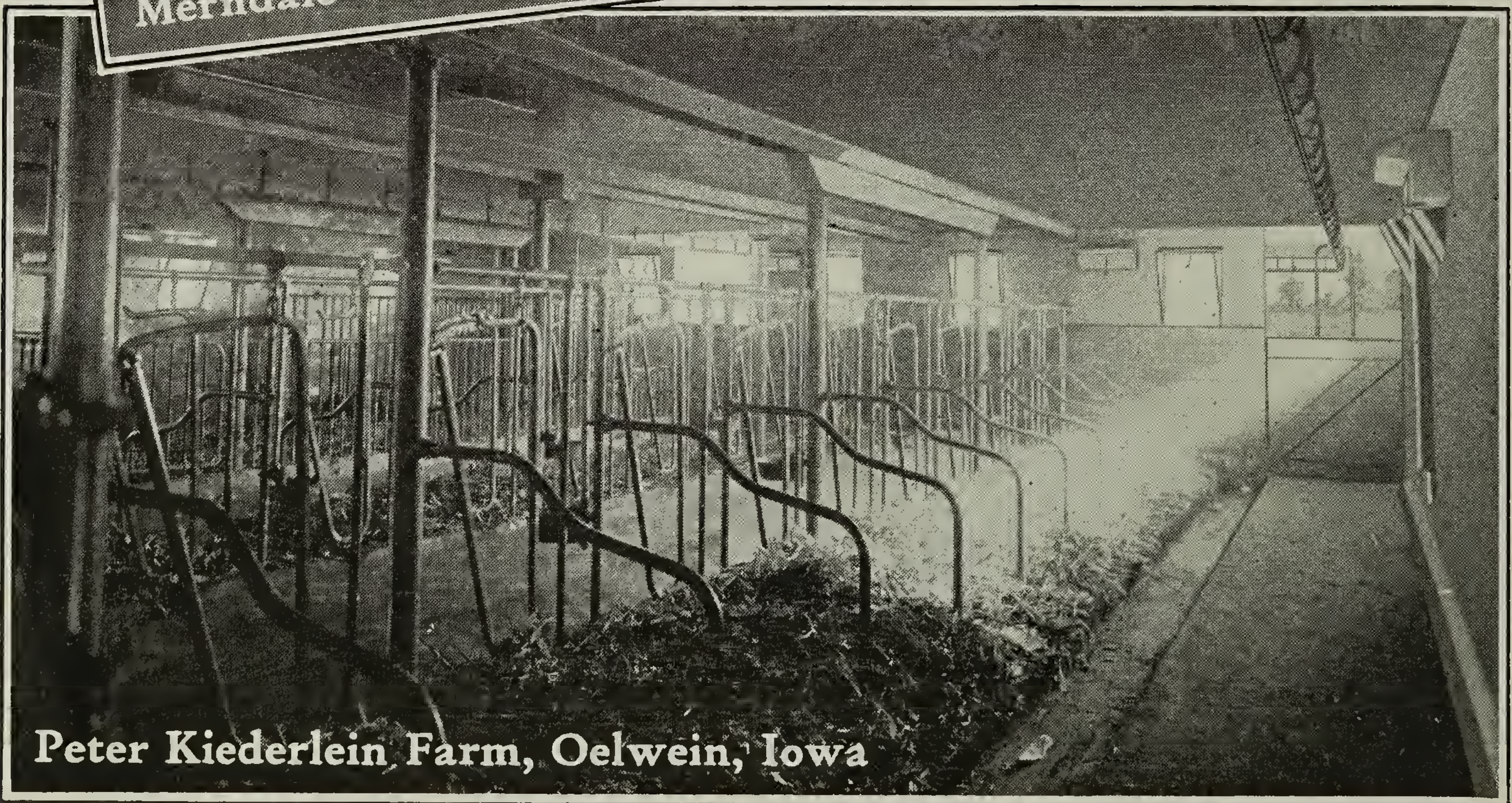




CLAY Windows in Merndale Dairy Stable, Cedar Falls, Iowa



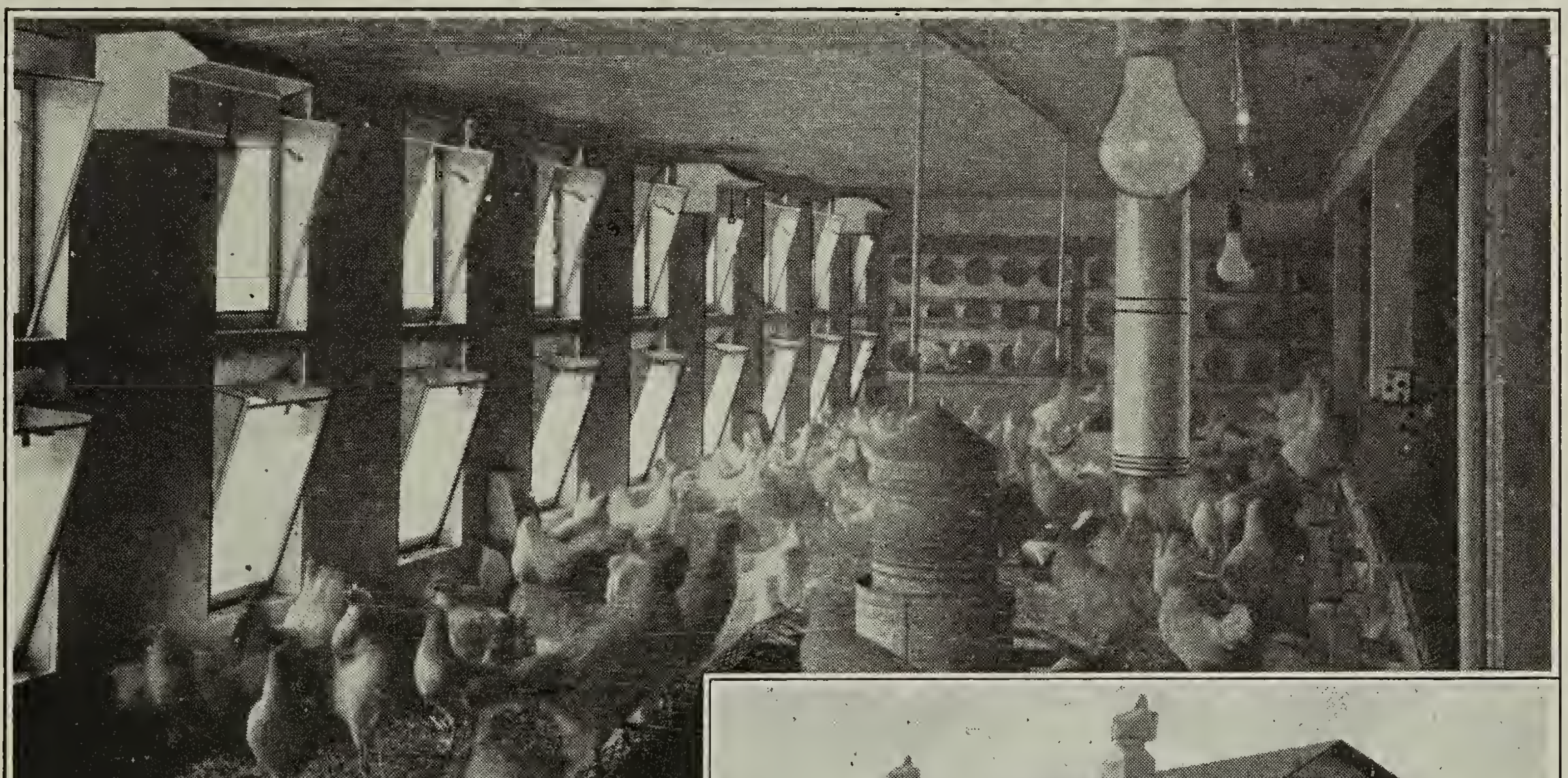
Merndale Calf Pen Section



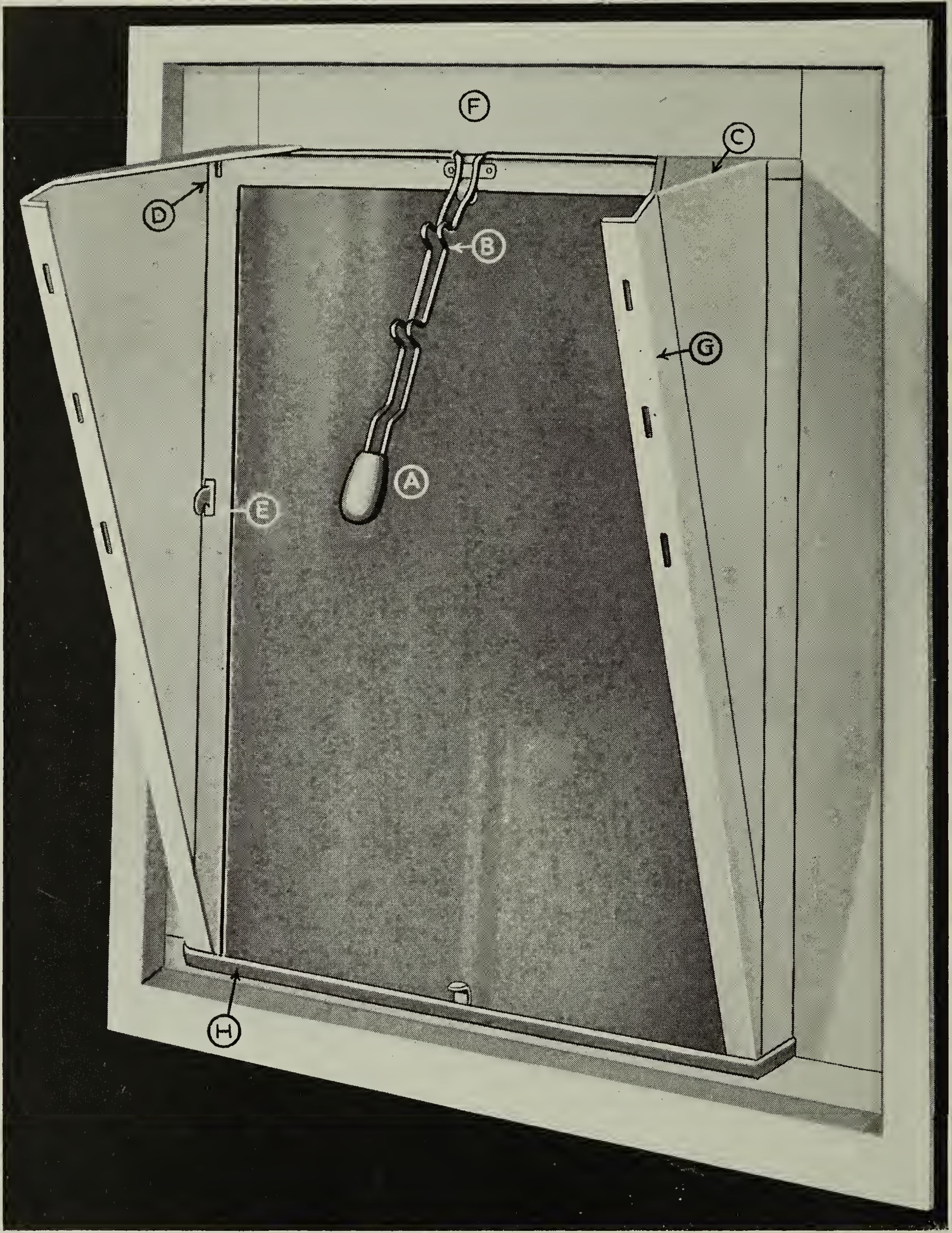
Peter Kiederlein Farm, Oelwein, Iowa

With Good Equipment Hens Lay When Eggs Pay

Feeding - Breeding - Culling are Only Halfway Effective Without Good Housing



Romberg Poultry Farm
Greenville, Wisconsin
Clay Windows and Ventilation



Clay Weather-Tite Window

For Wood Walls

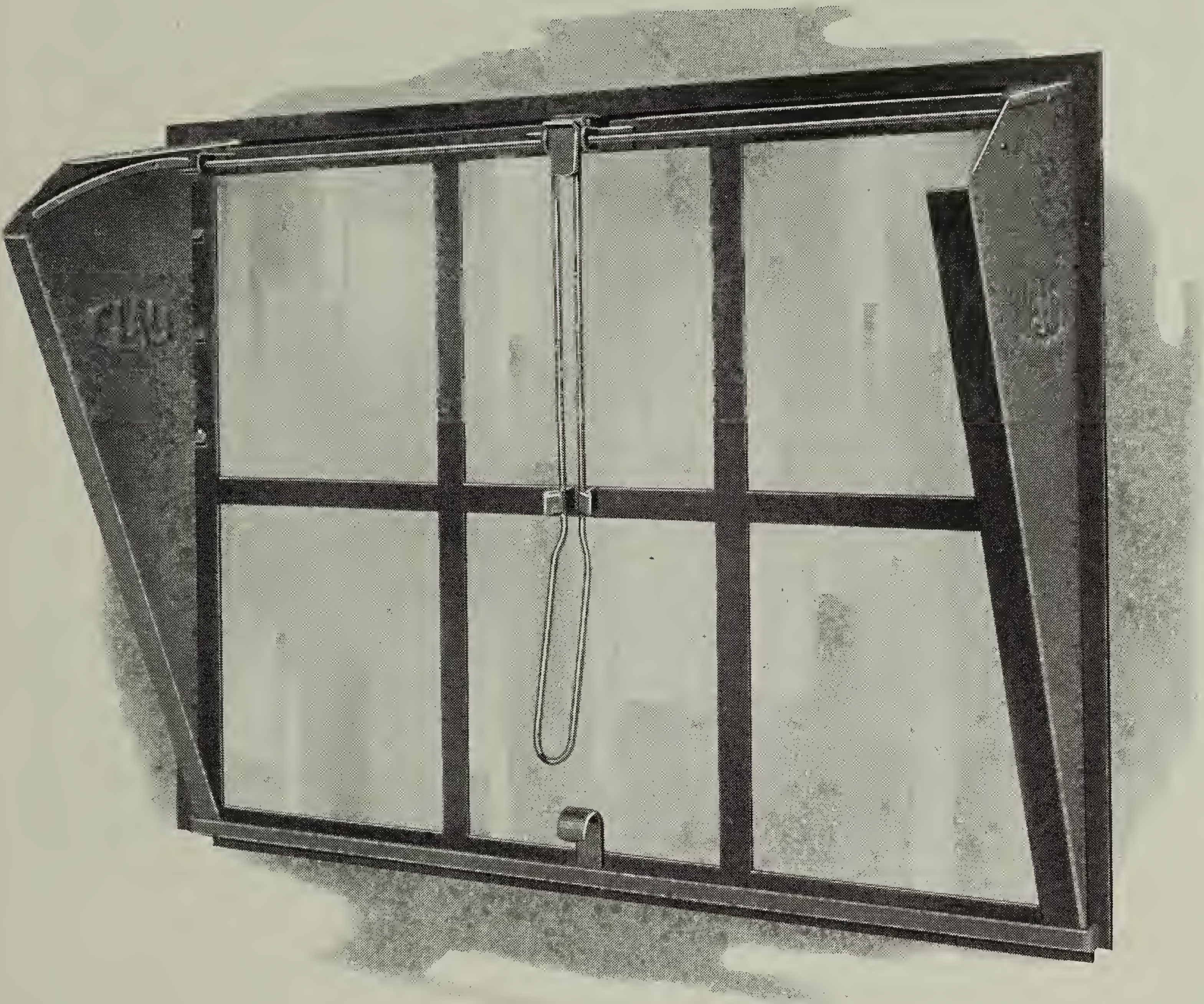
A. Weight on latch handle exerts a heavy pressure at upper corners of window at D.
B. Handle engages top of tilted window for adjustable ventilation.
C. Wing is braced to top of frame.
E. Hook engages slots in wing when opened.
F. Back side of exterior casing which is 3½x1½″.
G. Flange of wing is removable to insert window.
H. Precipitation and drain gutter leads outside.

$\frac{3}{16}$″ ribbed glass standard — ¼″ wire ribbed glass or $\frac{3}{16}$″ crystal clear glass can be furnished. Frames, wings and glass trim crated. Glass boxed.

W W20-30 — Glass 20½″x 30″, overall 32″x 40″. } 24 gauge copper bearing galvanized steel, aluminum finish.
W W20-36 — Glass 20½″x 36″, overall 32″x 46″. }

Clay Air-Way Window

Heavy Steel Construction



New and exclusive features are incorporated in the CLAY Air-Way solid section ventilating window. The combination regulating and locking device offers unlimited range of adjustment for ventilation. The sash can be tilted inward and locked in any open position enabling close control of incoming air to regulate stable temperature and air purity.

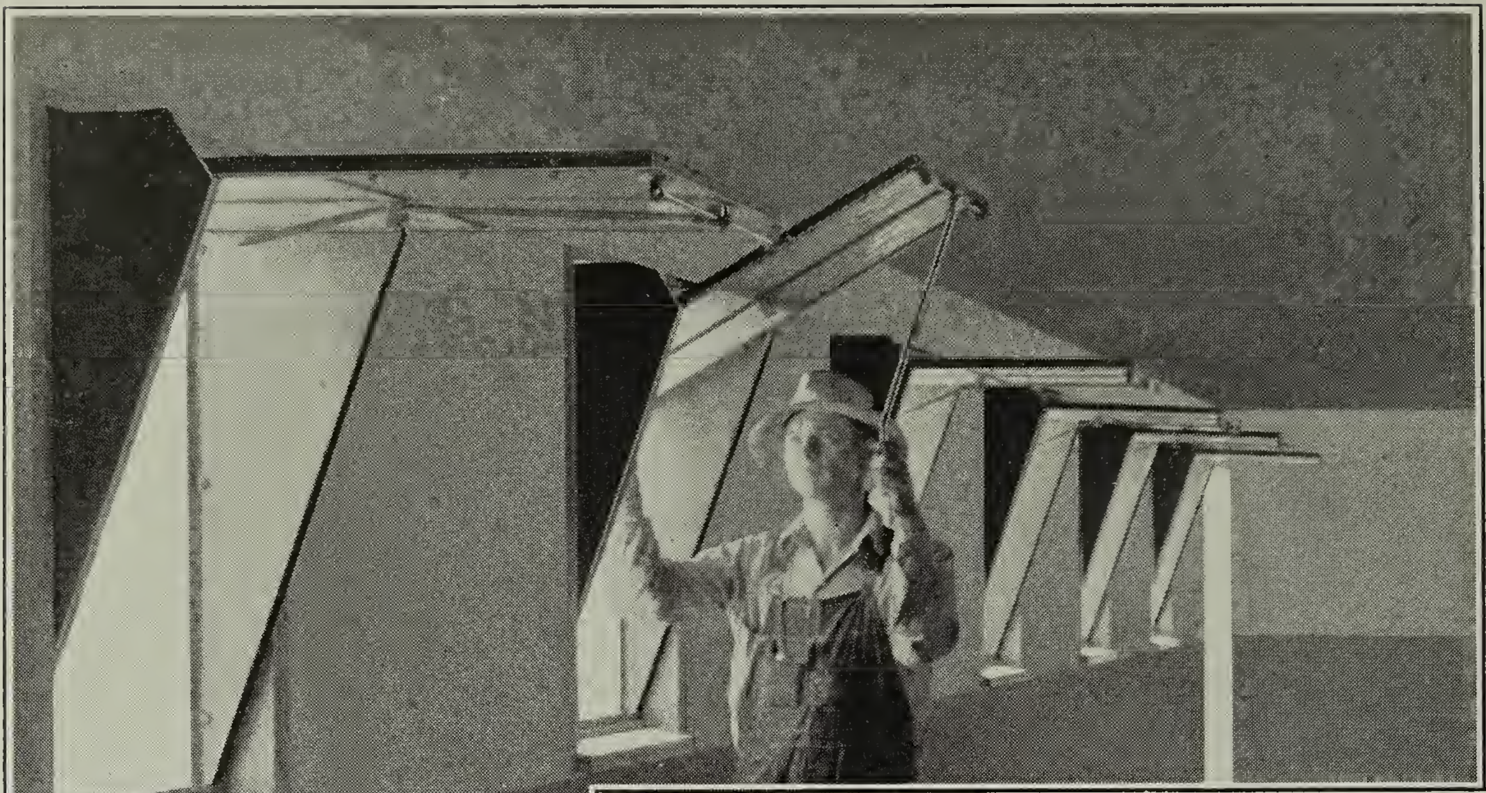
When closed, the latch locks the sash tightly against the frame, thus preventing any air or water leakage. When the latch is disengaged, it automatically applies pressure against the top of steel frame, effectively forcing the sash from the frame. No sticking, regardless of weather conditions.

Another feature permits lifting the sash to variable heights so that air may enter at both top and bottom. Sash also slides up and is securely held next to ceiling for full window opening.

As both sash and frame are heavy solid steel sections, electrically welded (not riveted) it eliminates any possibility of swelling, warping, shrinking or rotting out. Easily installed in any type of wall construction.

Fittings to fasten fly screen or storm sash can be supplied.

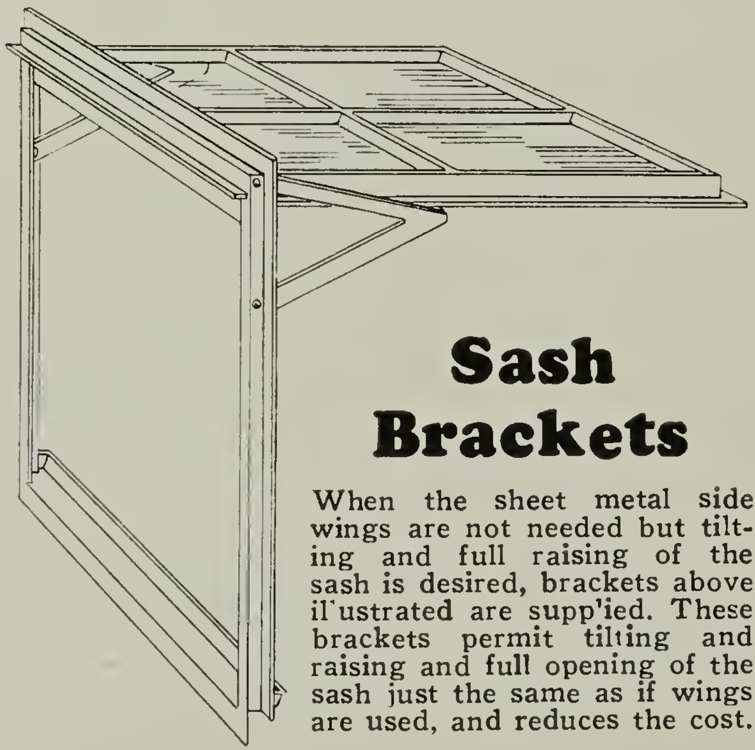
CLAY Air-Way Windows are shipped unglazed. Metal glazing clips are furnished. For a perfect air and water tight job, glass must be puttied in, using steel sash putty only.



Full Window Opening

For summer ventilation is strikingly illustrated in the above interior view of the Wm. Haak barn near Marion, Iowa. Note the easy operation to raise the window underneath the ceiling.

L. V. Smith barn, Central City, Iowa, showing attractive appearance of the Clay Air-Way windows, 9 lights, 10"x12". Of course, Mr. Smith used Clay Agricultural Vita Glass.



Sash Brackets

When the sheet metal side wings are not needed but tilting and full raising of the sash is desired, brackets above illustrated are supplied. These brackets permit tilting and raising and full opening of the sash just the same as if wings are used, and reduces the cost.

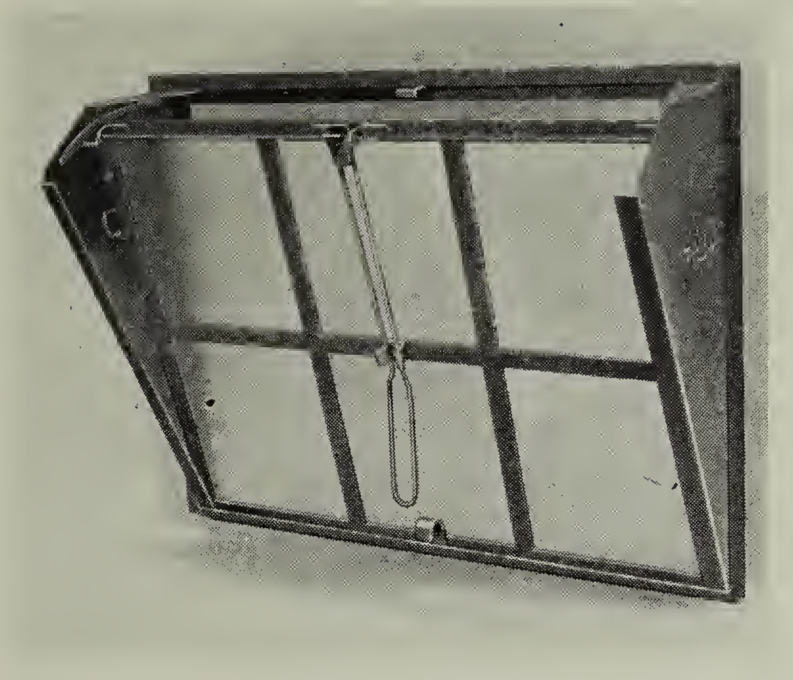
---

10 Advantages

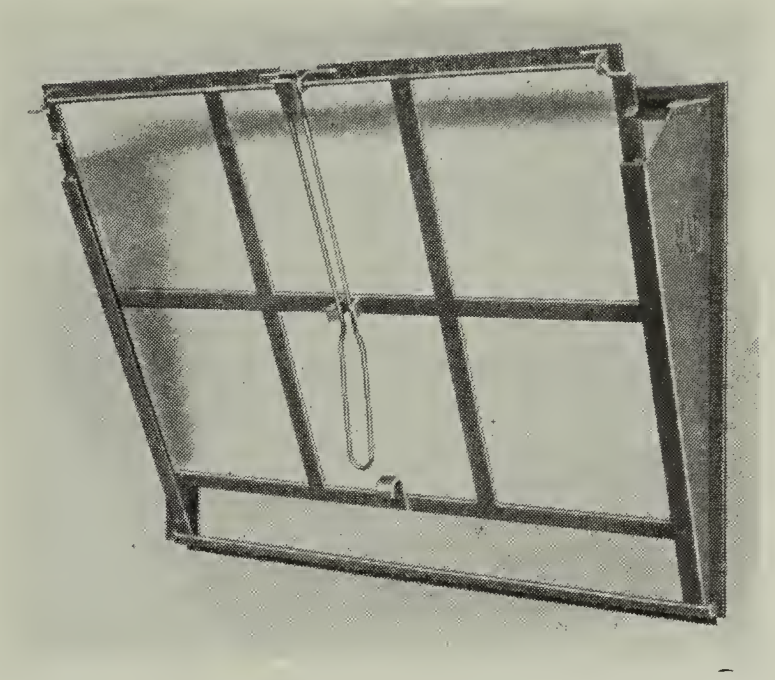
1. Does not swell and stick in wet weather.
2. Will not dry out and rattle in dry weather.
3. Latches solidly and snugly, locks at the center and at both top corners.
4. Latch easily reached by means of the long handle.
5. Long latch handle provides ample leverage for latching or disengaging.
6. Cam action of latch forces sash away from the frame on opening window, even though frozen in sleety weather.
7. The tilting sash and wings provide indirect overhead ventilation. No direct drafts on your animals.
8. Permits variable tilting, 1", 2" or 6" as you desire, locks securely at each position. The same easily reached latch handle does the trick.
9. After tilting it will raise to three different positions.
10. The only window to raise to full window opening, leaving the sash itself under the ceiling out of the way. Important in hot weather to secure ample breeze on your cattle.

Adjustable for Ventilation

(Patents Applied For)



Sash can be locked in any desired open position to regulate the amount of air inflow, avoiding direct drafts over animals.



Sash can be raised to three elevations. Fresh air enters stable at both top and bottom of window, admitting air freely.

Specifications

Frame—No. 12 and 10 gauge steel.

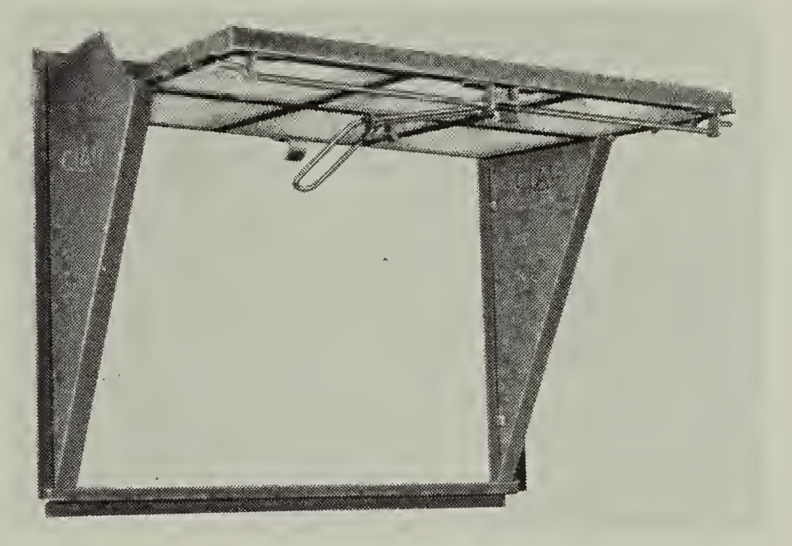
Sash—1″ x 1″ x ⅛″ Tee bar electrically welded into solid unit.

Wings—No. 24 gauge copper bearing galvanized steel.

Latch—¼″ stiff galvanized wire.

Finish—Gray Enamel, Wings Galvanized.

Glass—Either 3/16″ ribbed, ¼″ wire ribbed, Clay Vita Glass or ordinary window glass can be used.



Sash slides up and is securely held next to ceiling for full window opening, out of the way, allowing head clearance.

STANDARD SIZES AND PRICES

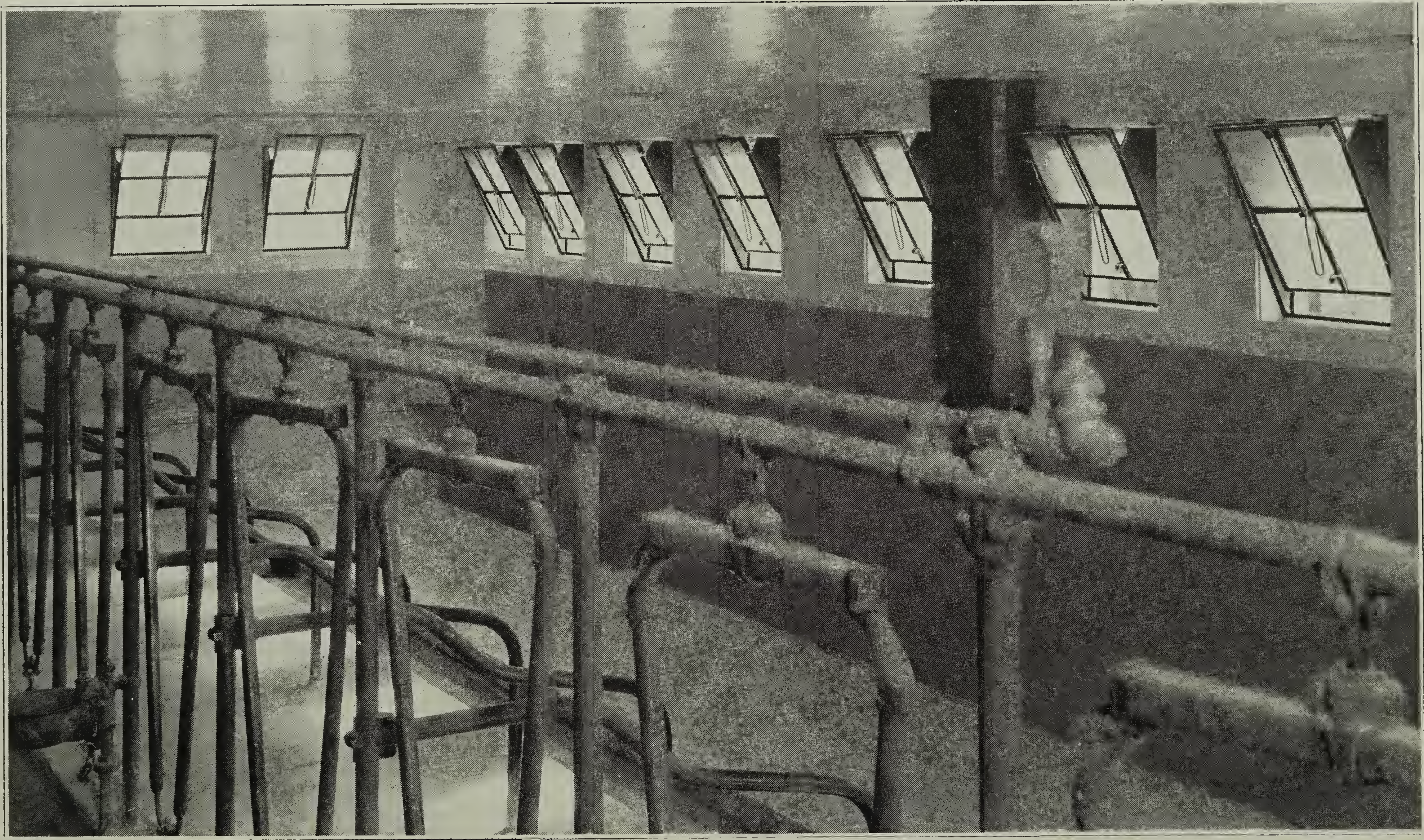
COMPLETE WITH WINGS
(No Putty)

Catalog Number	No. and Size Lights	Overall Frame Size	Glass Area Sq. Ft.	With Wings No Glass	Complete Wings and 3/16″ Ribbed Glass	Complete Wings and Vita Glass	Brackets in Place of Wings DEDUCT
AW4-10-12	4-light 10″x12″	22-5/16″ x 26-⅛″	3 1/3 ft.	$ 6.50 28 lb.	$ 7.35 36 lb.	$ 7.65 33 lb.	$ 1.00 6 lb.
AW4-12-16	4-light 12″x16″	26-5/16″ x 34-⅛″	5 1/3 ft.	7.30 35 lb.	8.65 48 lb.	9.15 42 lb.	1.35 7 lb.
AW6-10-12	6-light 10″x12″	32-⅝″ x 26-⅛″	5 ft.	7.10 33 lb.	8.35 45 lb.	8.85 40 lb.	1.00 6 lb.
AW6-12-16	6-light 12″x16″	38-⅝″ x 34-⅛″	8 ft.	8.45 41 lb.	10.45 61 lb.	11.25 53 lb.	1.35 7 lb.
AW9-10-12	9-light 10″x12″	32-⅝″ x 38-⅜″	7½ ft.	9.20 44 lb.	11.00 61 lb.	11.85 53 lb.	1.65 8 lb.
AW9-12-14	9-light 12″x14″	38-⅝″ x 44-⅜″	10½ ft.	10.00 49 lb.	12.65 75 lb.	13.60 65 lb.	1.85 10 lb.

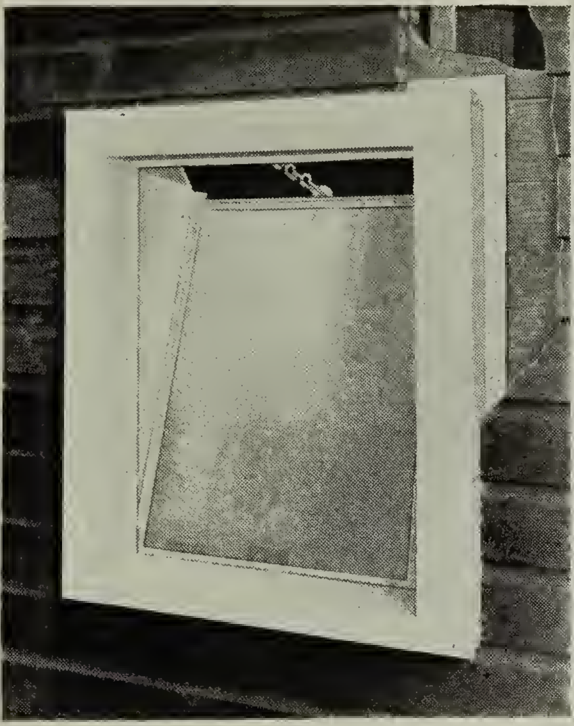
¼″ wired ribbed glass. Add $ .15 per sq. ft. of glass area to price of 3/16″ ribbed.

NOTE:
- 6-light windows are regularly made 3 wide, 2 high, unless otherwise specified.
- Overall frame size shown above does not include the outer flange. Therefore, in wood construction add 1¾″ to width and height. This permits approximately ¼″ clearance.
- We do not supply single or double strength plain glass. Special or odd sizes—prices on request.

See general price list;



Clean - Light - Convenient - Sanitary This dairy on the Witwer farm near Alburnette, Iowa, well illustrates the astonishing results of remodeling an old ramshackle stable



Satin Aluminum Finish.

Easy to Install

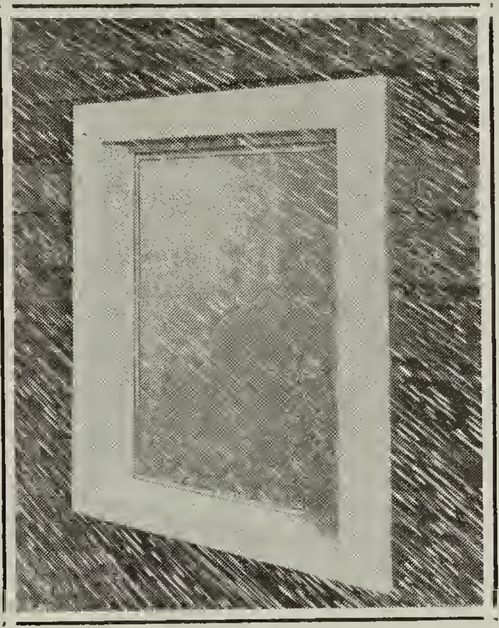
A minimum of carpenter labor is required. Window fits between studding 24" center to center. Studding may be either 2x4 — 2x6 or 2x8. Illustration at left shows simple method of installation and attractive, weather tight finished job. Large, well proportioned metal casing with satin aluminum finish presents a striking and beautiful appearance in the barn wall.

The upper right corner where finished lumber is cut away shows the flashing. It is continuous from the large metal casing and nails to the rough sheathing. No cracks — no leaks — no rot. **(See tables page 48.)**

$\frac{3}{16}$" ribbed glass standard — $\frac{1}{4}$" wire ribbed glass or $\frac{3}{16}$" Crystal clear can be furnished at slight extra cost.

Weather Proof

No water leaks into the building when rain, sleet or snow drives against the window. Provision is made when the window is tilted for the water to collect in a special gutter and it runs outside over the metal sill drip.



Rigid - Lasting Construction

No loose bolts, screws or rivets — the entire window is welded for lifetime service. Wings are scientifically braced and constructed so that the entire assembly is rigid and rattleproof — yet the window is easily changed to various positions without pounding or sticking.

To Assemble Window

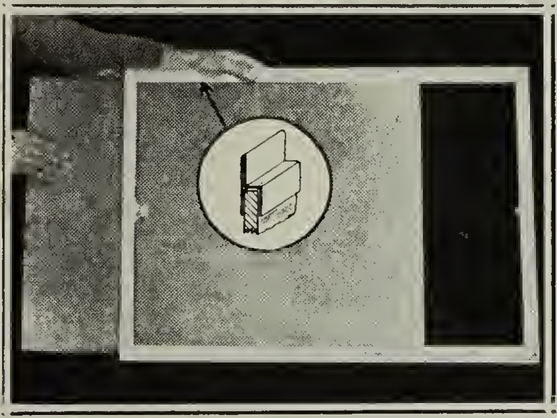
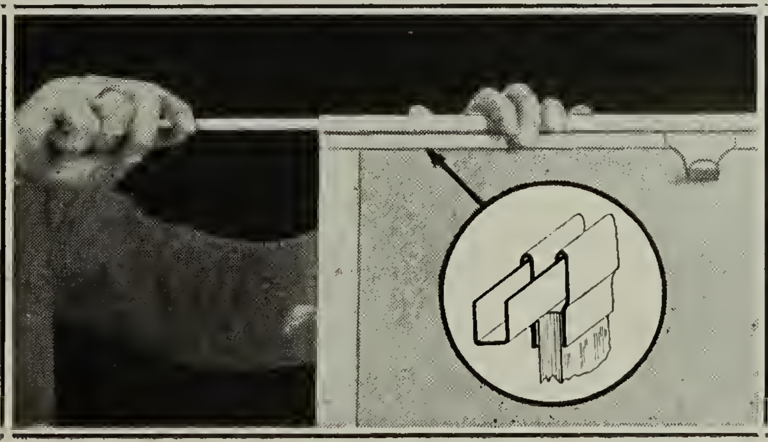
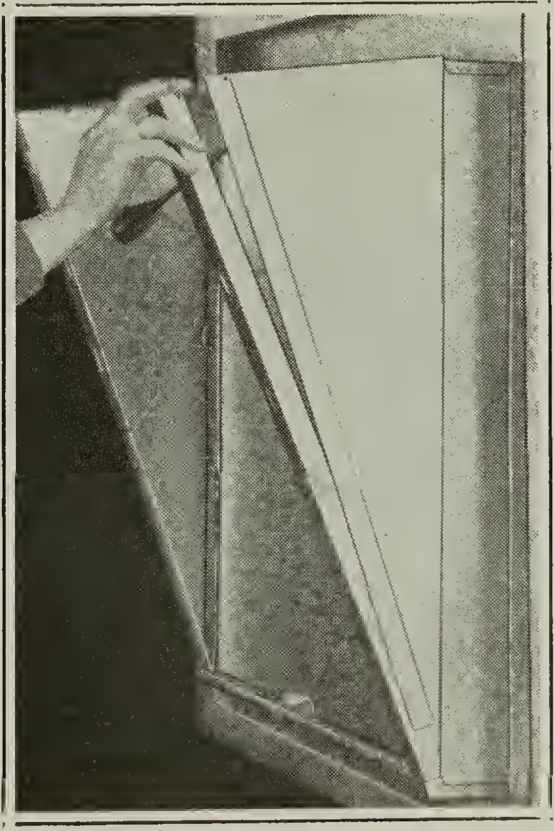


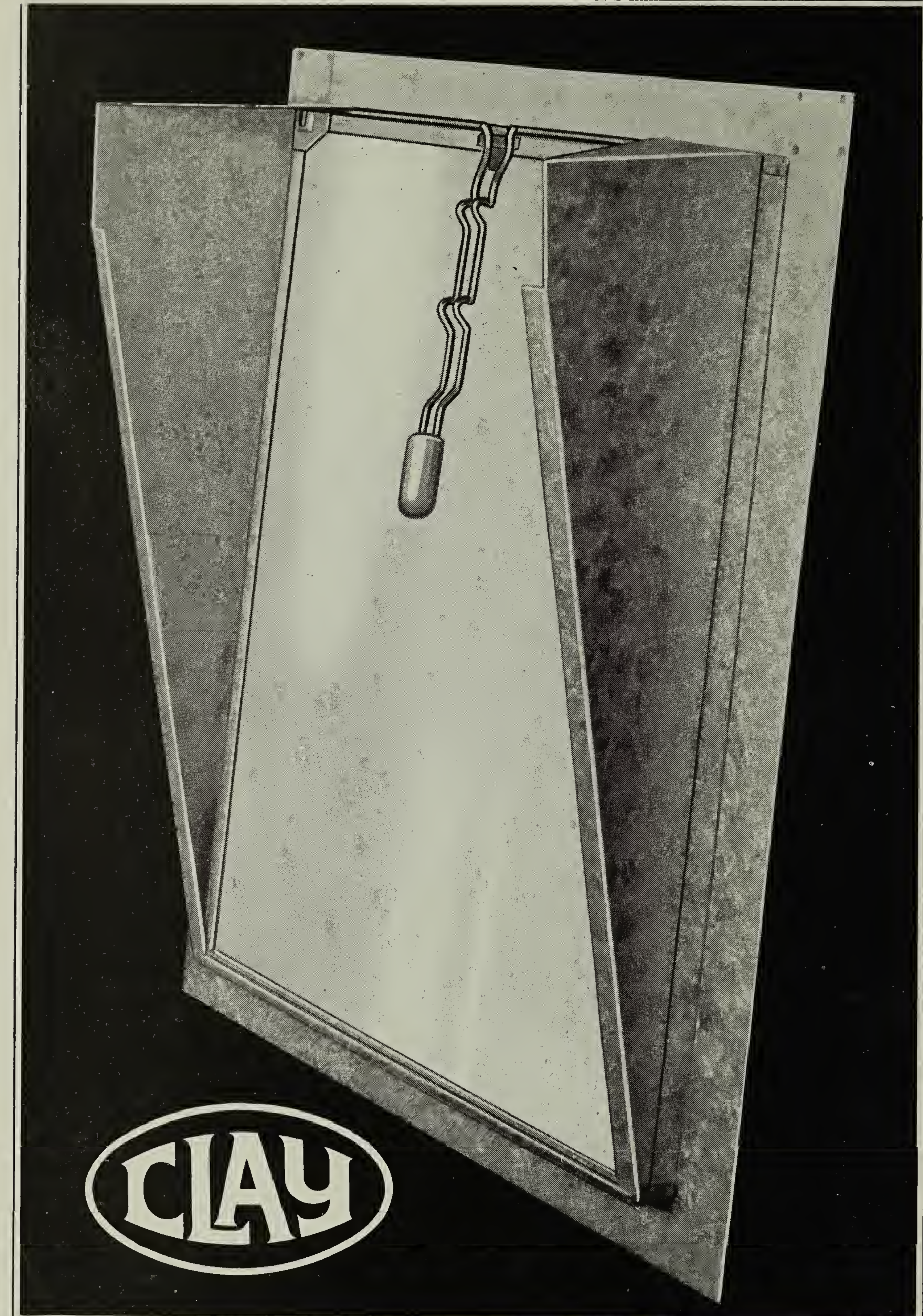
Illustration at left shows glass being inserted in metal binding or trim.

Lower left shows sash upside down and metal key to lock glass is being inserted.



At the right is shown flange of window wing being replaced after the sash has been placed in frame.

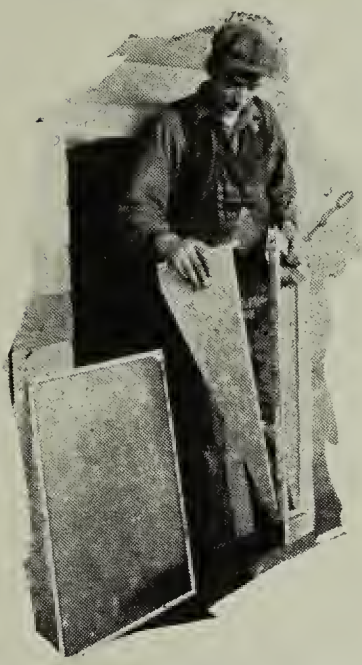




“ALL-PURPOSE” WINDOW

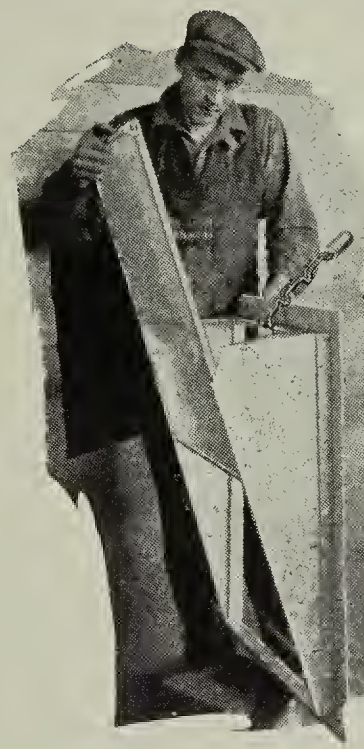
BW20-28 — Glass 20″ × 28″ = 3.9 sq. ft. Frames 12 per crate, 110 lbs. Glass with metal trim, 12 per box, 154 lbs. 26 gauge copper bearing steel. Guaranteed water tight. Patent Applied for.

Quickly and Easily Installed



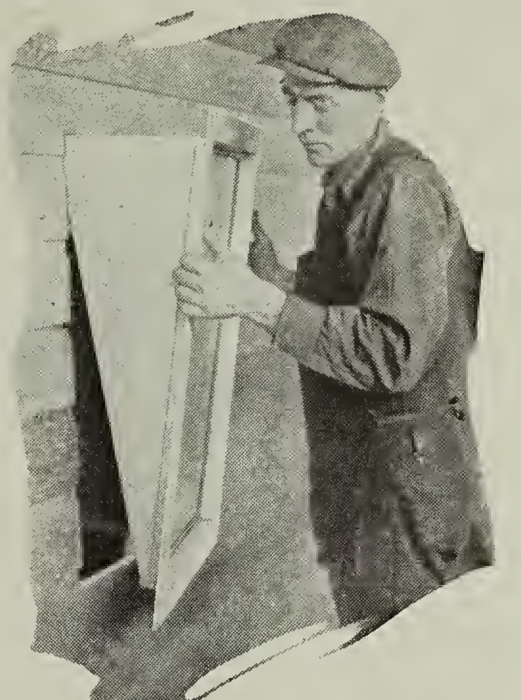
1. Easily Assembled

Easily and quickly assembled. Flanges at side and top of wings fit into grooves provided on frame, holding wings tightly and securely in place.



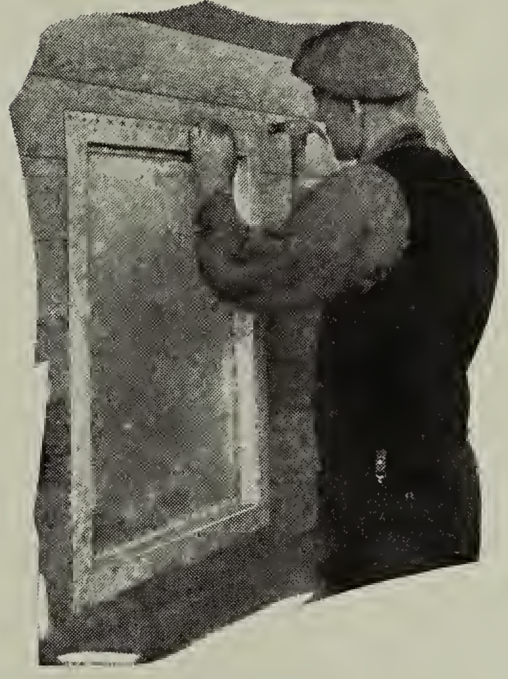
2. Slide in the Glass

Glass is heavy ribbed $\frac{3}{16}$″ thick, firmly bound on all edges with heavy gauge steel. Glass slides in from the top — can be removed any time if 9″ clearance is allowed from top of wings to underside of roof or ceiling.



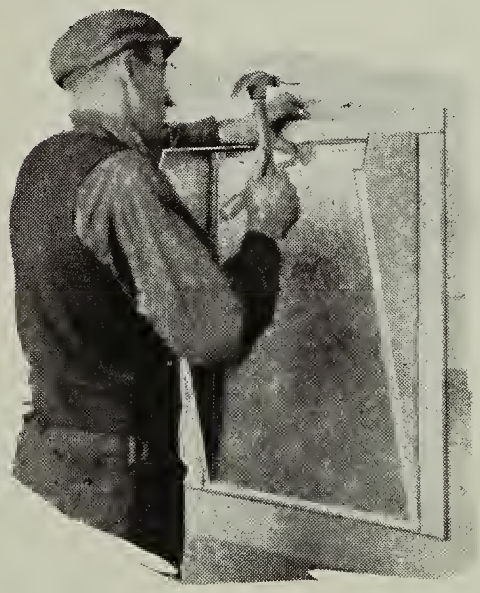
3. Insert in Wall

The assembled window is inserted thru the hole cut in wall 20½″ wide by 28½″ high.



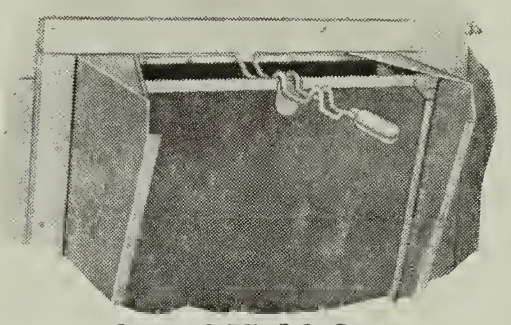
4. Nail Flashing

Drive nails close together through top flashing and every three inches through sides and bottom for proper installation.



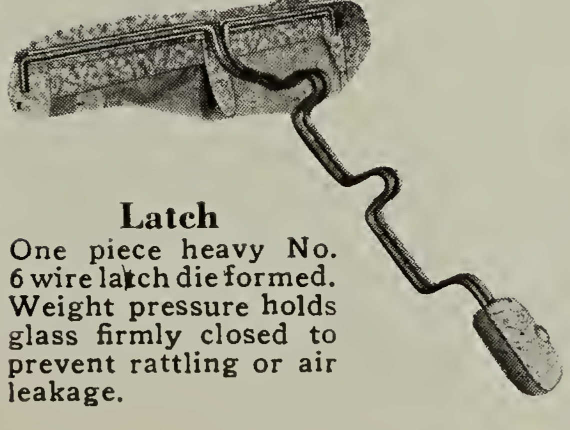
5. Nailing Cleats Inside

Cleats 1″ x 2″ at top and sides complete the installation, and these cleats lock the wings in place.



6. Lock and Hold-Open Latch

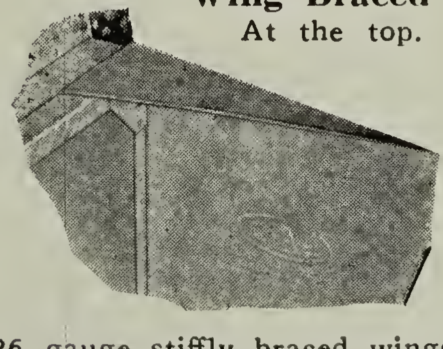
The combined simple lock and hold-open latch appeals to all who have seen it—a unique and exclusive feature. The weight at the end of the latch is by leverage multiplied thirty times thus thus holding the window tightly closed and locked, while at the same time the latch serves to hold window one-third open, two-thirds open and wide open. Glass securely held at each position — cannot rattle or blow shut.



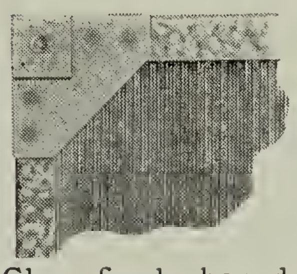
Latch

One piece heavy No. 6 wire latch die formed. Weight pressure holds glass firmly closed to prevent rattling or air leakage.

Wing Braced
At the top.

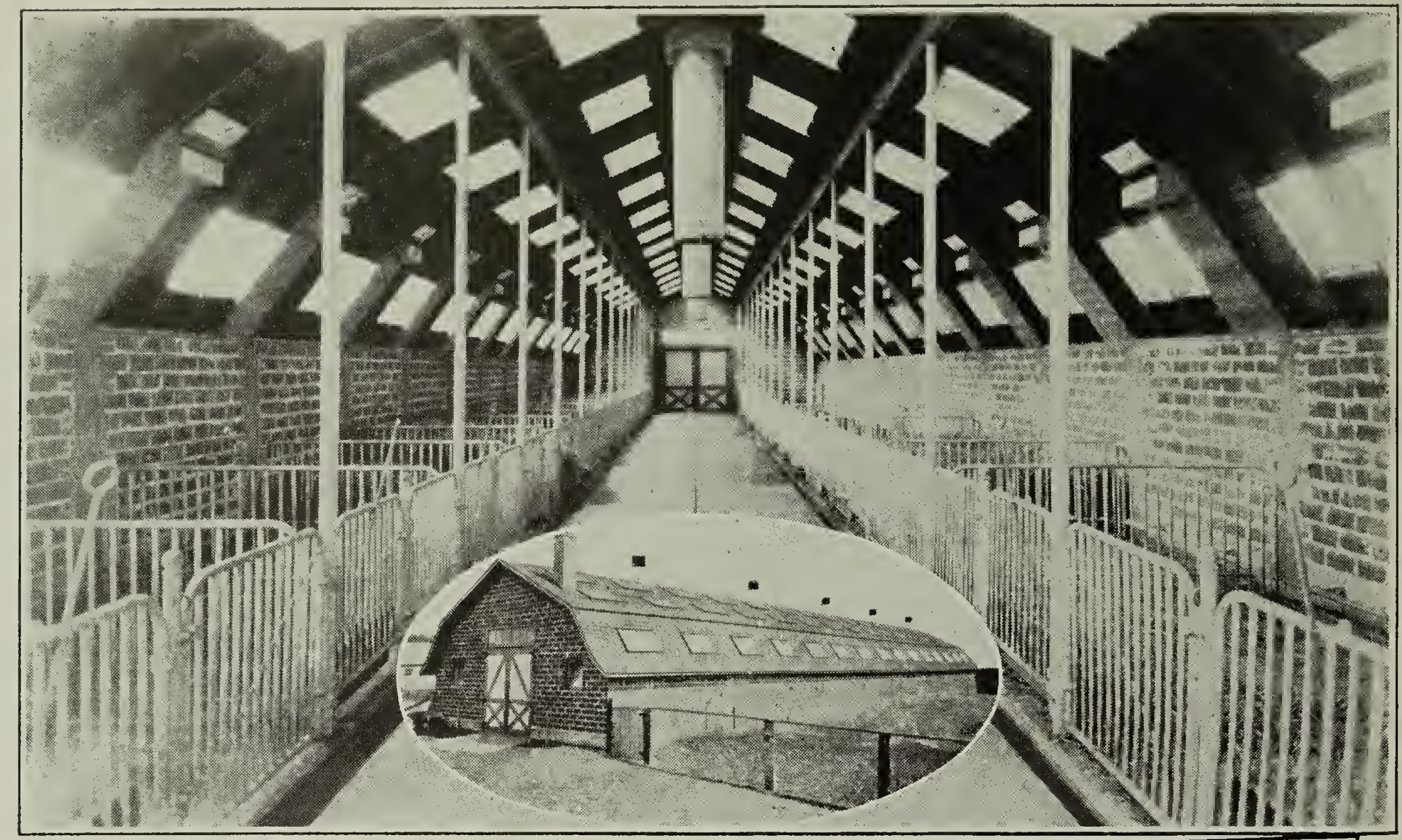


26 gauge stiffly braced wings—not flimsy or wabbly.



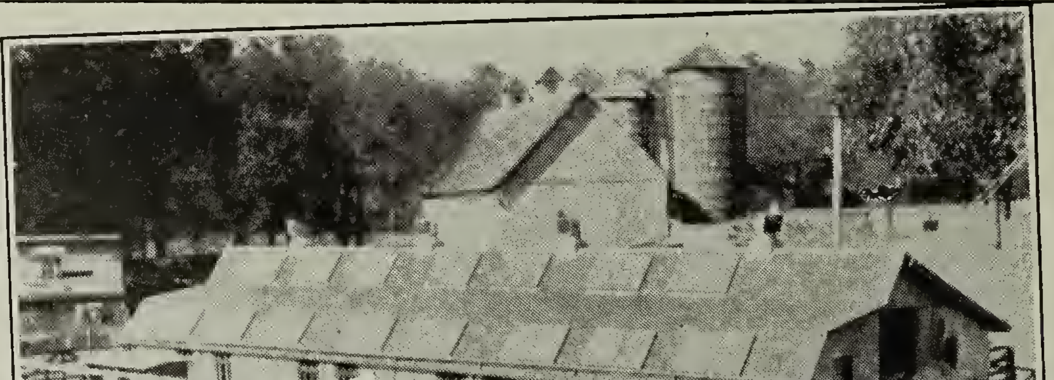
Strong Corner On Sash

Glass firmly bound on all sides, reinforced with stiff, welded corners at the top.



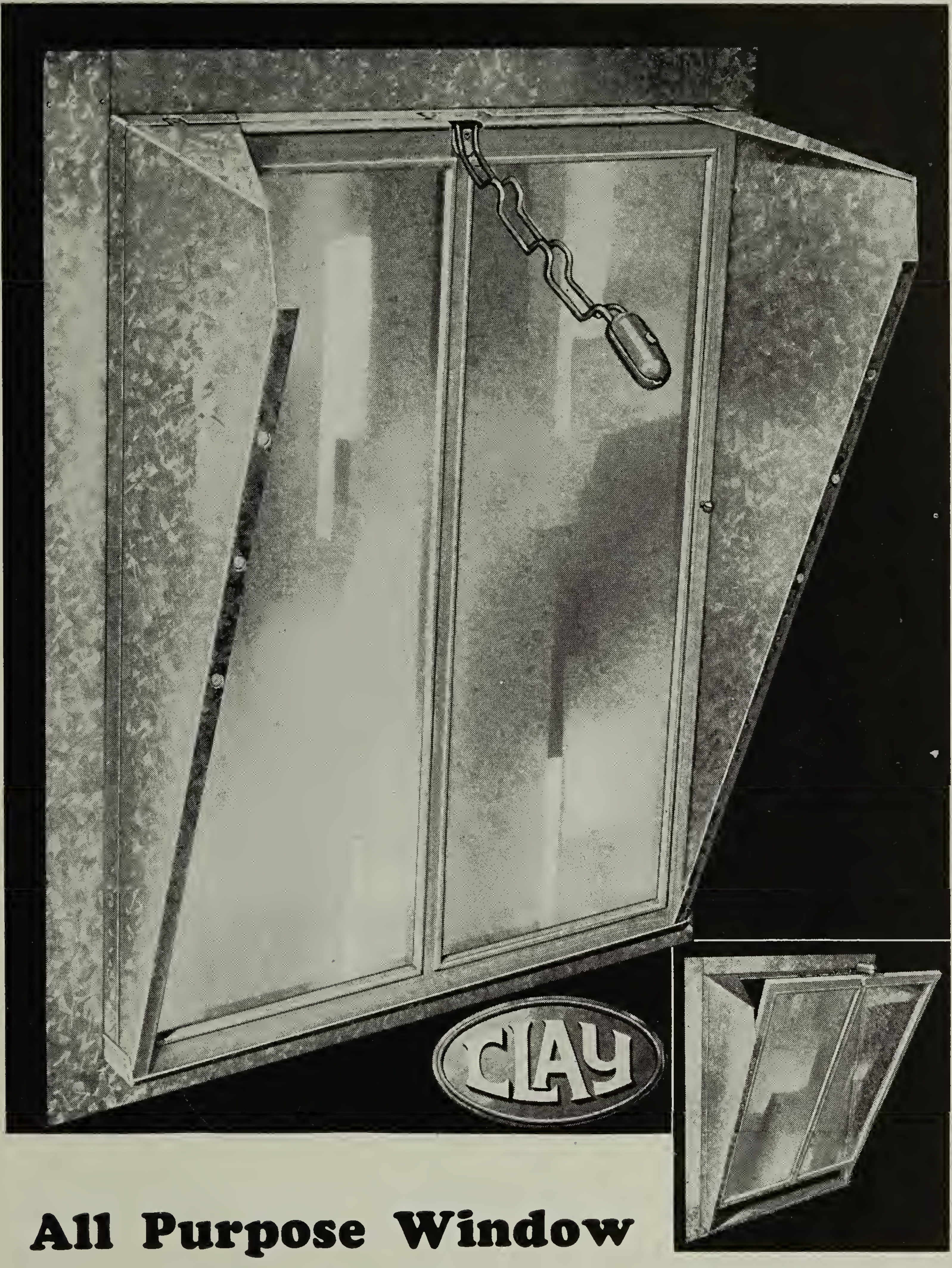
State Hospital, Independence, Iowa, hog house completely CLAY equipped with windows, steel pens and ventilation.

Picture to the right shows CLAY Sunlit Hog House. Park College, Parkville, Mo. —CLAY equipped.



M. L. Johnson, Grundy Center, Iowa — Complete equipment by CLAY.

CLAY Windows and Ventilation.

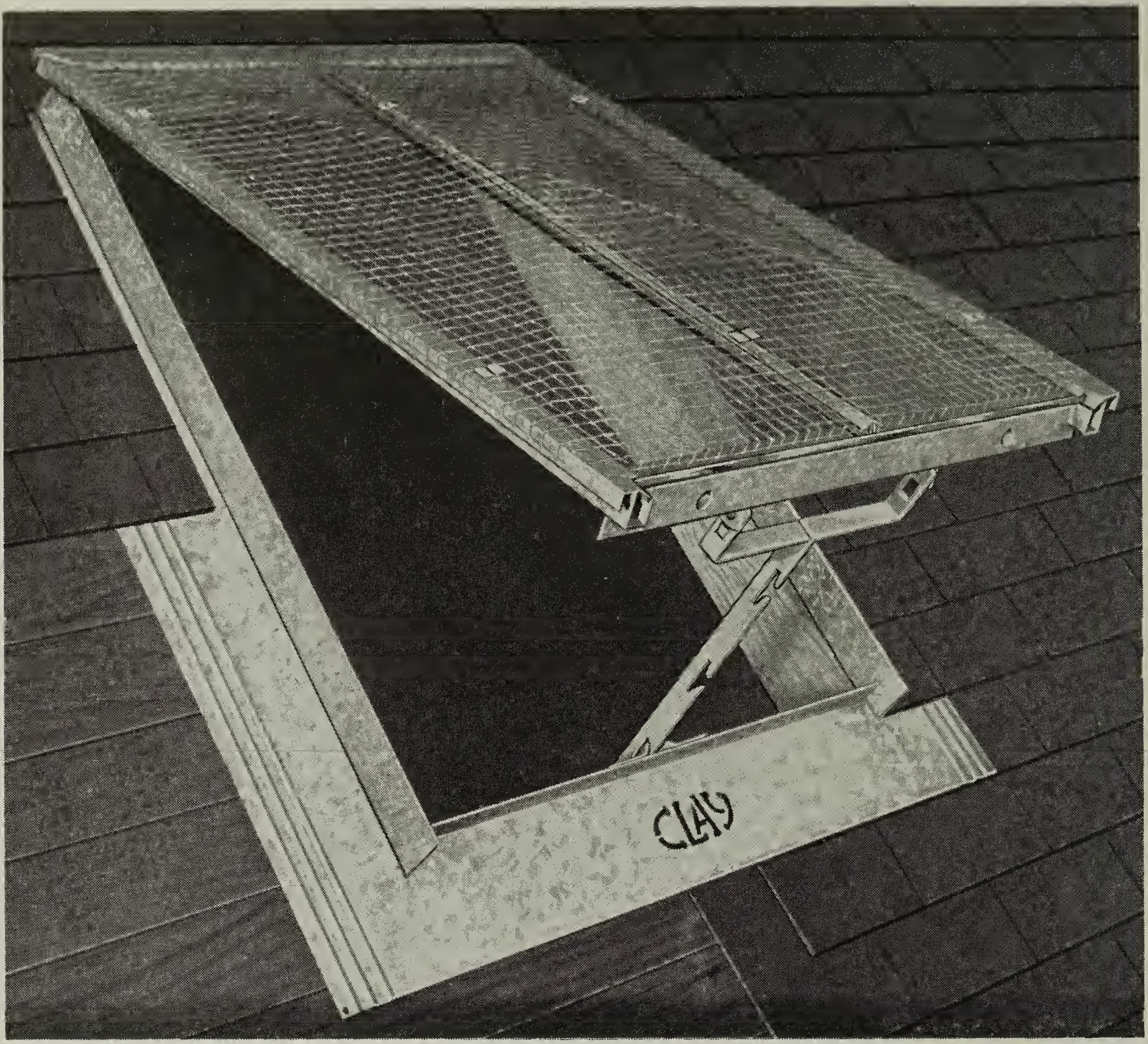


All Purpose Window

[Wood Sash]

BW 22-30 two-light 10″ x 28″. Wood sash complete with wood glazing strips. Sash adjustable to three heights for top and bottom ventilation. Latch enables tilting windows to three positions.

Frames, 12 per crate, weight 120 lbs.; wood sash, 12 per crate, weight 20 lbs. VITA GLASS, 24 lights per box, weight 135 lbs. Frames made from 26 gauge copper bearing steel. Guaranteed waterproof. Wood sash is creosoted.



Clay Ventilating Roof Window

Ventilating roof windows are a great favorite for use in modern poultry and hog houses of low ceiling construction. They offer the quick escape of hot, stuffy, mid-summer air, still providing ideal lighting throughout the building. By simple adjustment to various degrees of opening, you can regulate the ventilation and temperature to suit seasonable weather conditions.

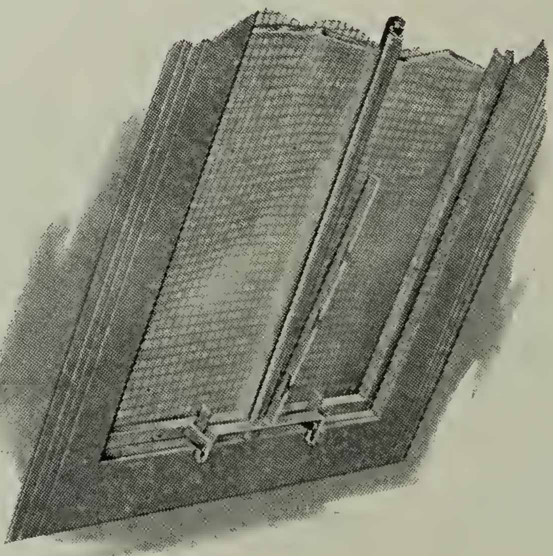
The lever is always out of the way. Folds up as illustrated when the window is closed, allowing full head clearance. Lever locks sash tightly and securely to frame, preventing warm air and water leakage. When raised for ventilation the latch holds the glass and sash firmly against heavy winds, preventing slamming and rattling.

Any moisture condensation is drained to outside of roof—no dripping.

Size glass—2 lights 10″ x 28″. Either plain, Vita or ribbed glass may be used. Wire screen is necessary when using plain or Clay Vita Glass.

Frame securely packed 6 or 12 in box. Weight 12 frames, 165 lbs. Weight 24 glass, 135 lbs.

VRW 20x28 Clay Ventilating Roof Window.



Full Head Clearance

16,000 11-33 MCO.

These birds are enjoying springtime conditions while hard winter rules outside. They respond with increased egg production.

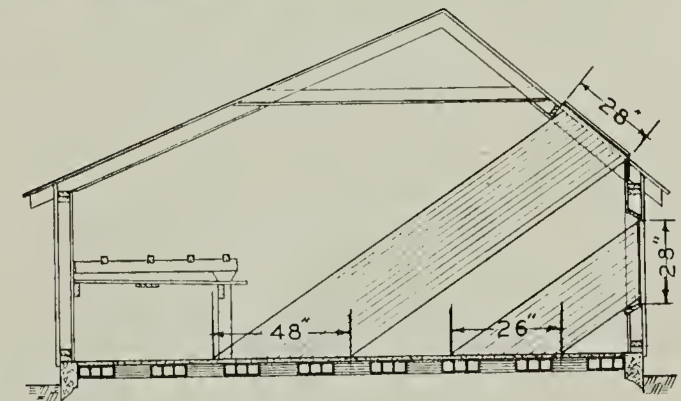
Clay Roof Windows

Do the Most Good

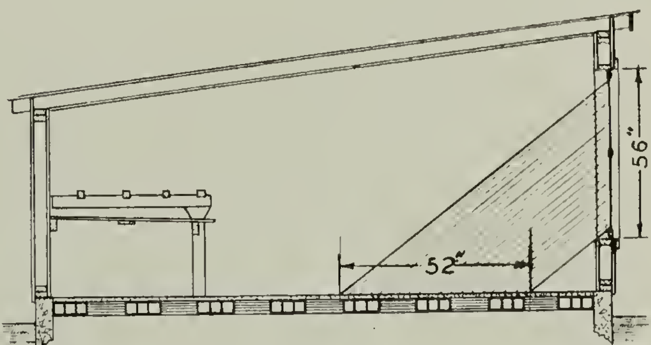
All poultry and hog raisers insist on a house full of sunlight and warmth. CLAY Roof Windows throw direct light back under the roosts and flood the entire house with invigorating sunlight whereas, windows on front of building allow sunlight to go but a short distance into the house.

CLAY Roof Windows equipped with thick $\frac{3}{16}$″ ribbed glass admit far more light than do ordinary windows, therefore considerably less windows are needed and a warmer house results.

Just as soon as the sun peeps over the eastern horizon broad bands of warm sunlight stream through the CLAY Roof Windows. Not merely spots of sunlight here and there, but broad diffused light sweeping over every foot of the poultry and hog house.



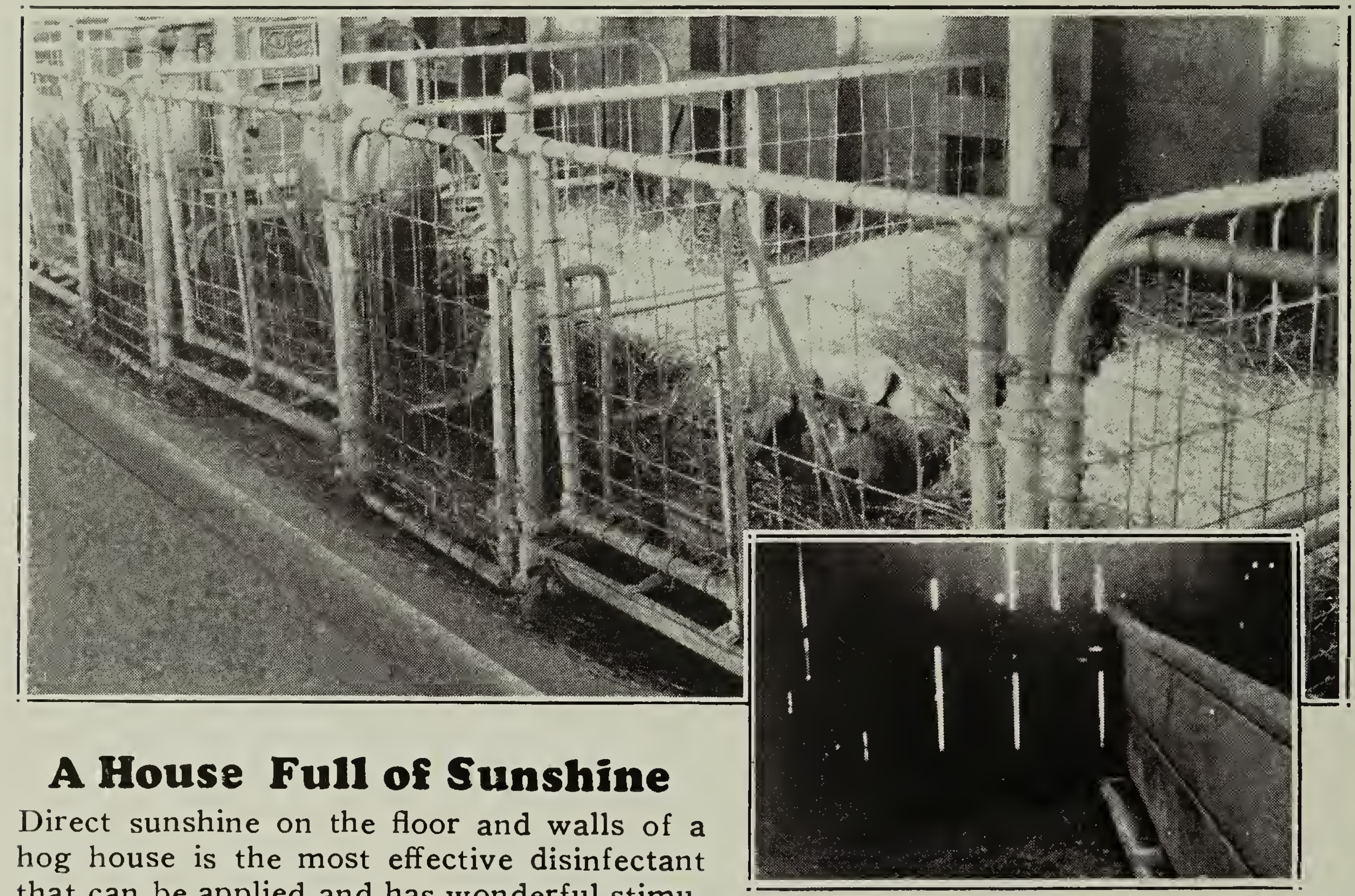
Note the broad band of sunlight 8 feet wide. CLAY ribbed glass windows spread the sunlight over a wide area the full length of the house, even though windows are spaced 6 ft. apart.



This illustrates the 52″ width of sunlight on the floor from 56″ high side wall window. Unless house is unreasonably high it is limited to the front half only. Upper picture shows 48″ of sunlight on floor from roof glass only 26″ high. Also see page 45.

Sunshine Makes Vigorous Hogs

THERE is nothing so stimulating and invigorating to early farrowed pigs as sunlight. Without sunlight there can be no profitable swine husbandry. Sunlight, the great universal germ destroyer promotes dryness, warmth and sanitation. That is why swinemen find it more profitable to use CLAY Roof Windows — they admit more sunlight and spread it over a larger area than other windows, see pages 43 and 45.



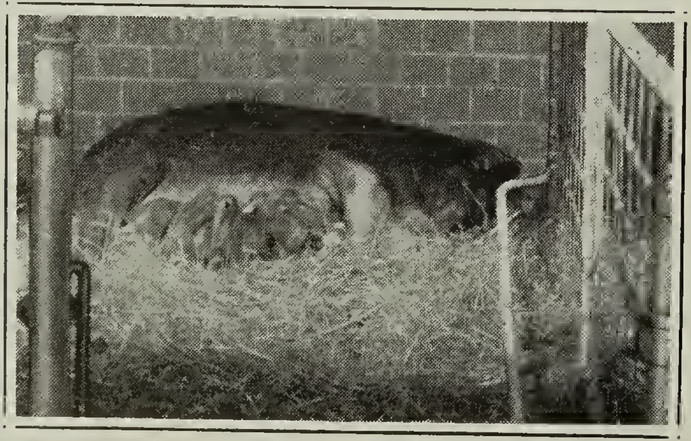
Cold, Wet, Unhealthful

A House Full of Sunshine

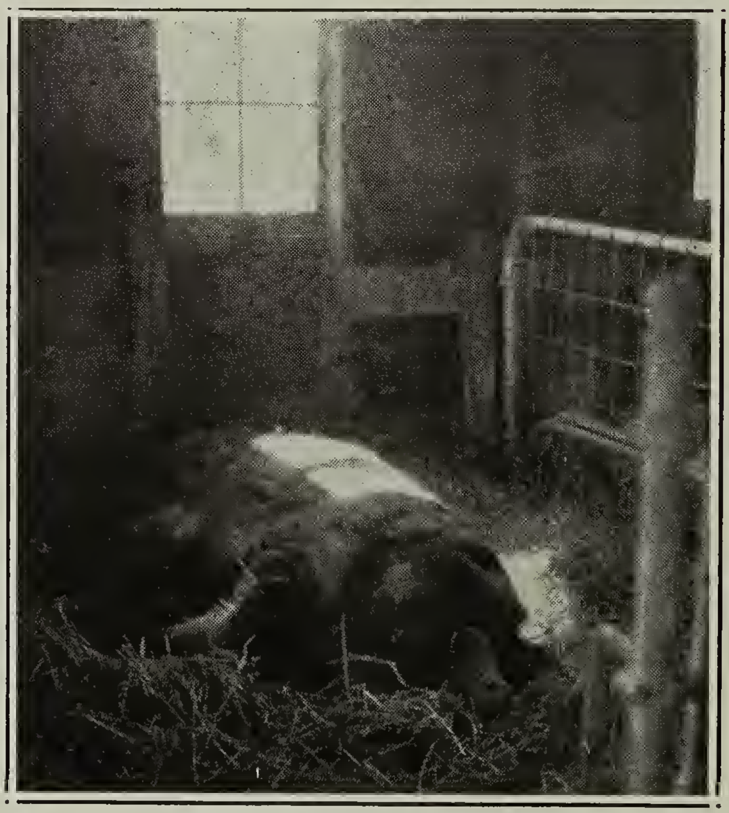
Direct sunshine on the floor and walls of a hog house is the most effective disinfectant that can be applied and has wonderful stimulating power to the life of young pigs.

See insert picture, right, above, showing unfit place to raise hogs. This dark shed with leaky roof, ground floor, cracks in the siding, no sunshine is a menace to the owner's profits.

A sow that farrows in a sunlight house stands twice as good a chance of producing a large and healthy litter as does the sow that farrows on a cold bed of straw in some dark shed.



Showing the advantage of CLAY Roof Windows. Stimulating sunshine is spread over entire pen.



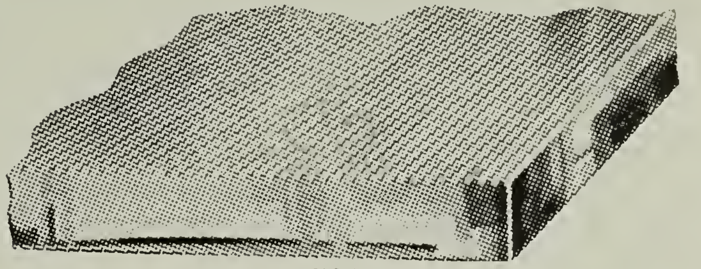
Showing disadvantage of ordinary window in side wall. Merely a spot on the floor and unless the pigs happen to be in the small bit of sunshine, they do not get the benefit.

More Sunlight—Less Windows

YOU cannot have too much sunlight for the early farrowed pigs, but you can have too much glass in the roof. During the early farrowing season there are only 6 hours of the day when the sun accomplishes the best results. For the remaining 18 hours the heat is being radiated from the hog house, the most of the heat loss passes through the window glass, because glass is a great conductor of heat.

Therefore, it is highly important to introduce ample sunlight without having too much window surface to release all the accumulated warmth and thus chill the pigs.

With CLAY Roof Windows you can have a continuous spread of sunlight sweeping every foot of floor space, yet having a minimum amount of window area.

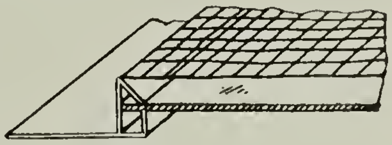


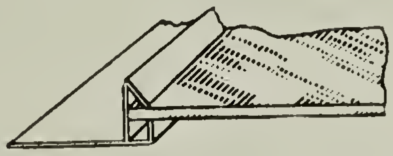
Actual Thickness

Clay Windows Let in 14.6% More Light

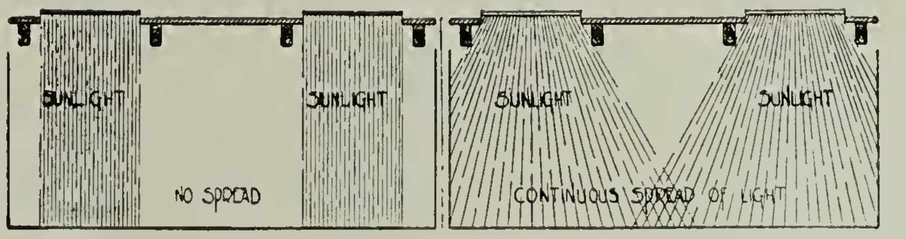
This fact was undeniably determined by extensive tests made by the Illuminating Bureau of the Westinghouse Lamp Company.

Plain window glass with screen over it as protection against hail. Only admits 73½% of sunlight.



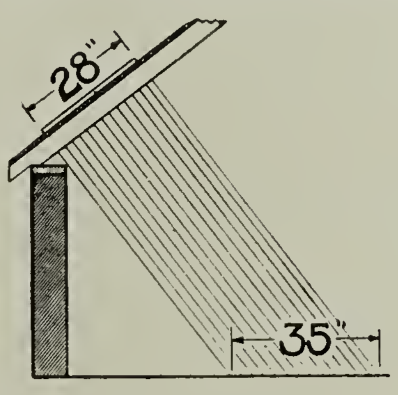


Clay ribbed-glass, admits 84 per cent sunlight, or 14.6 per cent more than ordinary glass when covered with wire screen.

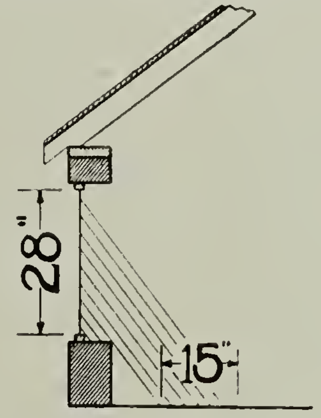


Ordinary Windows CLAY Ribbed Glass Windows

With CLAY Roof Windows every part of the hog house floor is warmed and disinfected by the sunlight.



A 28 inch CLAY Roof Window throws 35 in. of sunlight on floor of pens.

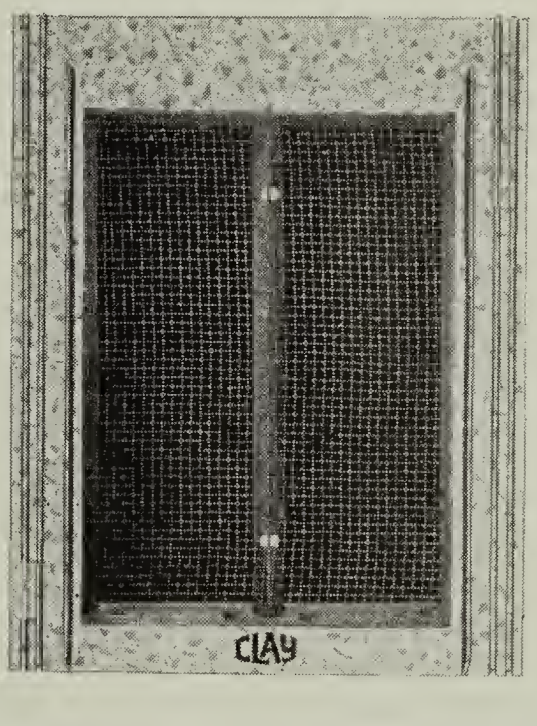


A 28 inch side wall window under same conditions throws 15 in. of sunlight on floor of pens.

Only Clay Windows Do This

Just as soon as the sun peeps over the Eastern horizon two broad bands of warming sunlight stream through CLAY roof windows pouring directly into the pens.

From early morning until sunset you have a "houseful" of sunshine—not merely a spot here and there as with ordinary windows.



Clay Baby Twin Windows

Regular CLAY quality window permitting use of either S.S., plain glass, or double strength glass. Supplied with and without screen. Vertical drain rib prevents water running under roof and adds stiffness to frame.

HW163 — With screen, (no glass). (Requires two glass 10″x 28″ S. S. plain) obtain glass locally. 6 or 12 per crate.

HW164 — Without screen (No glass) (Requires two ribbed glass 10″x 28″.

Clay Twin Window HW160

Best suited for buildings facing south. Place two rows on south roof only spacing them six feet center to center.

Very best quality window made. Non-leakable frame made of 26 gauge copper bearing steel. Has vertical drain rib and condensation gutter. Complete with $\frac{3}{16}$″ ribbed glass which diffuses and spreads the sunlight in broad bands full length of the building. No tools or putty required to install.

Size of each glass 24″x 28″ high making a total glass size 48″ wide by 28″ high. All corners reinforced by welding and soldering. Frames securely packed one-half dozen per crate. Glass packed one dozen (for six windows) in a box.

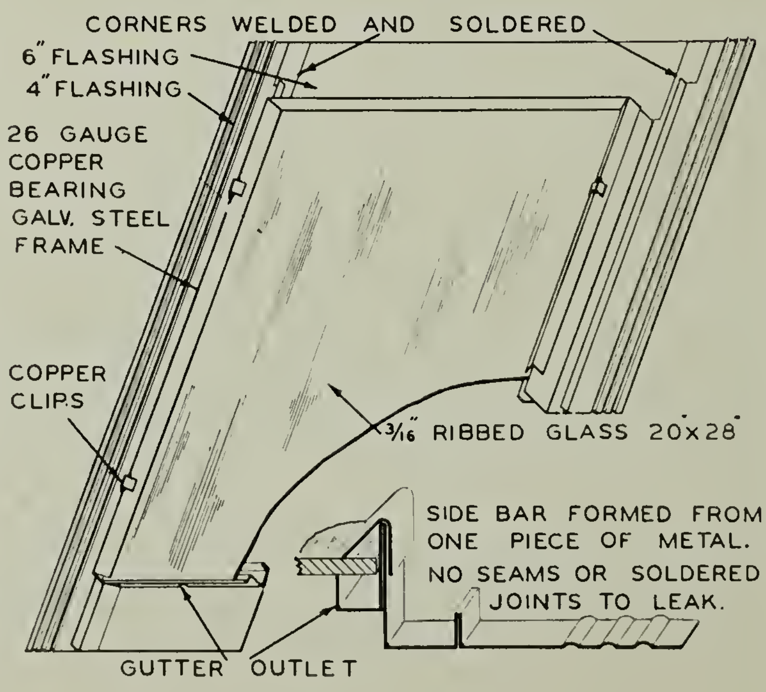
HW160 — With two glass. Frames, 12 per crate, 98 lbs. Glass, 12 per box, 186 lbs.

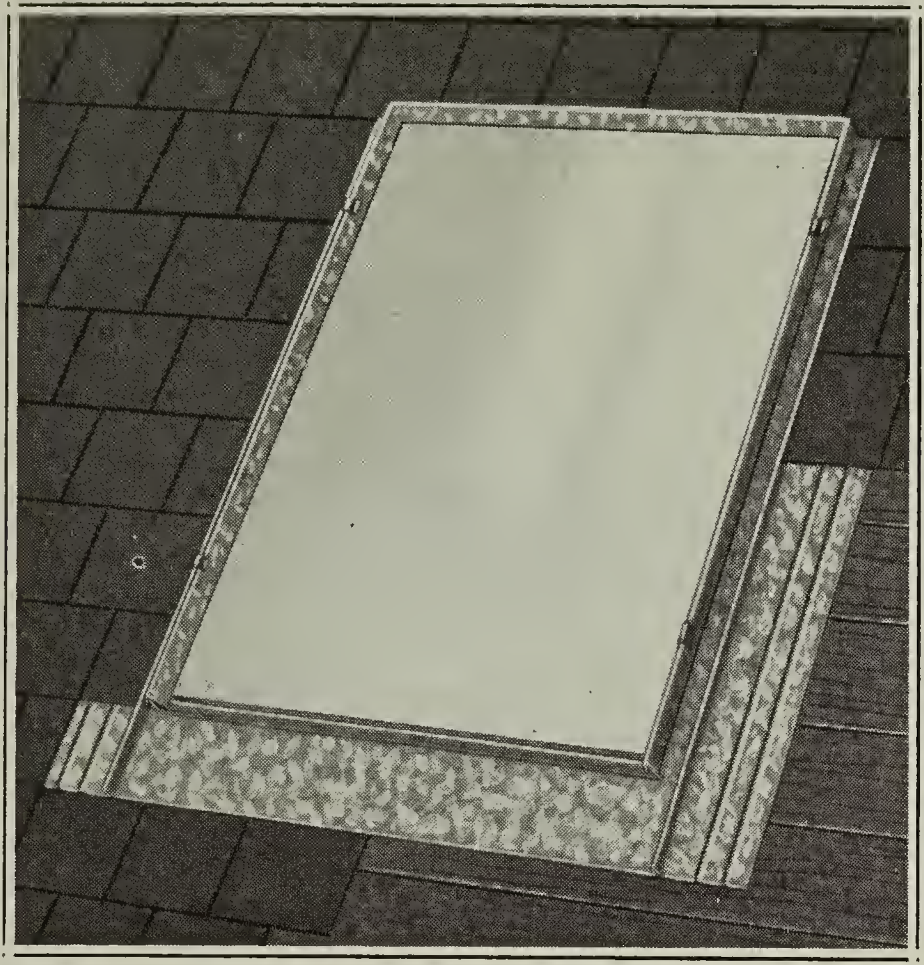
$\frac{1}{4}$″ wire ribbed glass and $\frac{3}{16}$″ Crystal Clear glass can be supplied at slight extra charge.

Superior Construction of Clay Windows

Nos. HW160 and HW154

CLAY roof windows are made so much better than ordinary windows that you must actually inspect them to realize the vast difference. Study the diagram which shows a few of the superior features. Note particularly the vertical drain rib which adds stiffness to the frame and forms gutter to carry off water during heavy rains. Note also condensation gutter under side of glass which carries off any precipitation of moisture.


CORNERS WELDED AND SOLDERED
6″ FLASHING
4″ FLASHING
26 GAUGE COPPER BEARING GALV. STEEL FRAME
COPPER CLIPS
3/16″ RIBBED GLASS 20x28″
SIDE BAR FORMED FROM ONE PIECE OF METAL. NO SEAMS OR SOLDERED JOINTS TO LEAK.
GUTTER
OUTLET



Very Best Quality Roof Window

For use on buildings running North and South. Place two rows of windows on each side of roof, two rows near ridge and two rows close to the eaves.

Diagram page 46 illustrates vertical drain rib and condensation gutter. This window is leak proof, made of 26 gauge copper bearing steel. Corners reinforced by welding and soldering. Seams are soldered top and bottom.

Size Glass 20"x28". Frames securely packed one dozen in crate. Glass carefully packed twelve in a box. Weight: Crate 12 frames, 112 lbs., wt. 12 glass per box, 135 lbs.

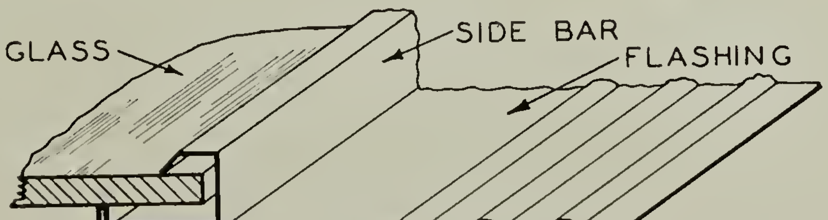
HW154 — Single Window with glass. 20x28 inches.

Clay Dandy Window

Popular priced window. Simple design and enormous production makes low price possible. Made of regular CLAY quality 26 gauge copper bearing steel. Greatly improved over ordinary low price windows. Complete with $\frac{3}{16}$" ribbed glass 20"x 28".

¼" wired ribbed glass or $\frac{3}{16}$" crystal clear glass supplied at slight increase in cost

Glass is inserted at lower end of frame and held securely by bending a lip at the lower end of side of the frame. Has side rails adding stiffness to frame, gutter is also provided beneath glass that leads out on roof.

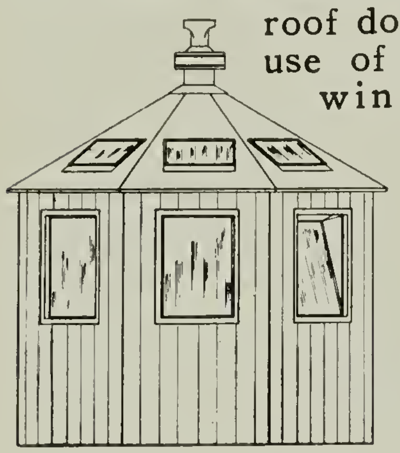


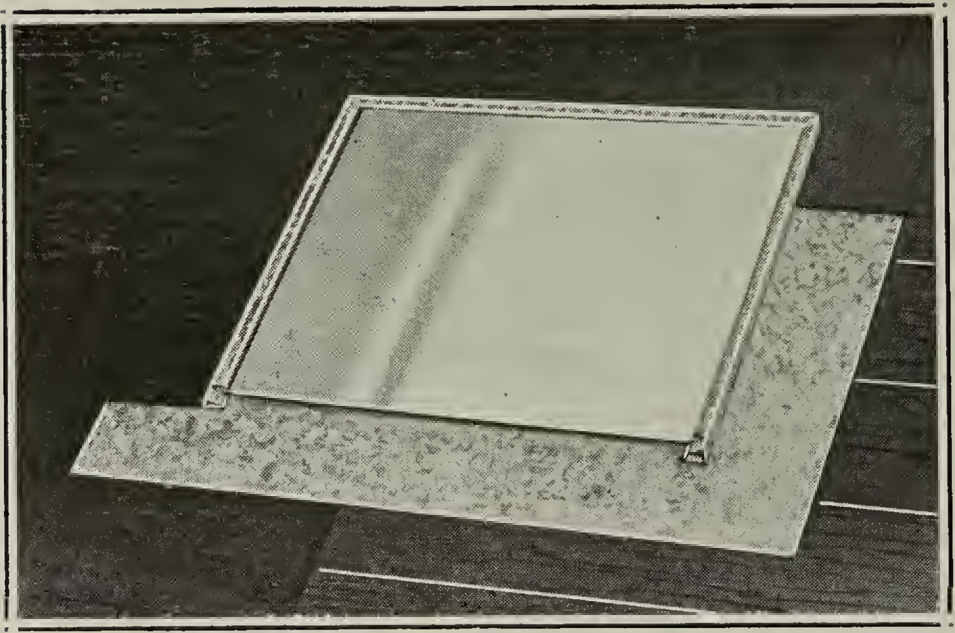
CLAY DANDY

HW166 — Single window with glass. Frames securely packed 12 in crate. 62 lbs. Glass packed 12 in a box, 135 lbs.

Brooder Window

Special short length roof window for use on octagonal brooders built less than 10 ft. as shape of roof doesn't permit use of full length window. The frame is identical with the CLAY Dandy Window, page 47.





HW20-14 — Brooder Roof Window with glass. Packed: 12 frames, 12 glass. Weight of frame, 48 lbs., weight of glass, 82 lbs.

Number Windows to Use

BARNS [Wood Walls]

Figures below are based on 1 sq. ft. of glass to 20 sq. feet of floor area. Never less than 1 foot of glass to 25 feet of floor area.

Width	Window		LENGTH OF BARN IN FEET						
Barn	KIND	Glass Area	40'	50'	60'	70'	80'	90'	100'
32'	**WW20-36**	5 sq. ft.	13	16	19	22	25	29	32
	WW20-30	4.2 sq. ft.	16	20	24	28	32	36	40
	BW20-28	3.9 sq. ft.	16	20	24	28	32	36	40
34'	**WW20-36**	5 sq. ft.	14	17	20	24	27	30	34
	WW20-30	4.2 sq. ft.	17	21	25	29	34	38	42
	BW20-28	3.9 sq. ft.	17	21	25	29	34	38	42
36'	**WW20-36**	5 sq. ft.	15	18	21	25	28	32	35
	WW20-30	4.2 sq. ft.	18	22	27	31	36	40	45
	BW20-28	3.9 sq. ft.	18	22	27	31	36	40	45

POULTRY HOUSES [Wood Walls]

			Sunlit type house					Shed Type House				
Width	Window			Lgth. house in ft.				Length in feet				
House	KIND	Glass Area	20'	40'	60'	80'	100'	20'	40'	60'	80'	100'
16' or 18'	**BW20-28**	3.9 sq. ft.	4	8	12	16	20	8	16	24	32	40
	HW154	3.9 sq. ft.	4	8	12	16	20					
20'	**BW20-28**	3.9 sq. ft.	5	10	15	20	25	10	20	30	40	50
	HW154	3.9 sq. ft.	5	10	15	20	25					

Above figures are based on 1 sq. ft. of glass to approximately 12 sq. ft. of floor area.

For Sunlit type house we recommend one row of roof windows and one row of side wall windows. See cross section page 27. Under the column of the sunlit house, use 4 each of roof and side wall windows, 8 each, etc., according to length of building.

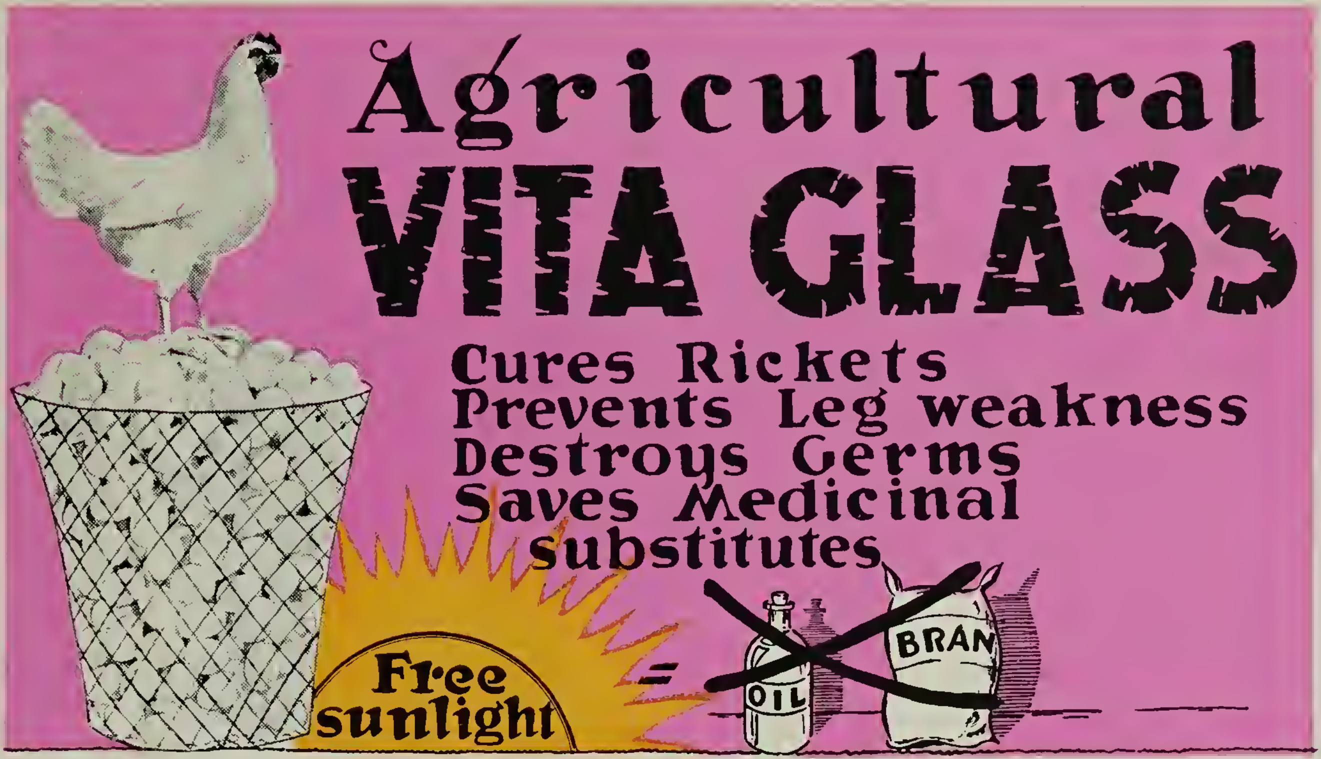
For Shed type house we recommend two rows of side wall windows, one above the other. See cross section page 29.

HOG HOUSES

Width	Windows		Length of house in feet								
House	KIND	Glass Area	20'	30'	40'	50'	60'	70'	80'	90'	100'
22' or 24'	**HW160**	10.7 sq. ft.	4	6	8	10	12	14	16	18	20
	HW154	3.9 sq. ft.	10	14	20	24	30	34	40	44	50
	HW166	3 9 sq. ft.	10	14	20	24	30	34	40	44	50

Above figures are based on one square foot of glass to approximately 12 square feet of floor area. See cross sections pages 23 and 24.

We recommend using **HW160** twin windows on hog houses running east and west.



Agricultural VITA GLASS

Cures Rickets
Prevents Leg weakness
Destroys Germs
Saves Medicinal substitutes

Use Nature's own way, Ultra-violet rays from the sun passing through this new marvelous material, Vita glass. This glass is now within easy reach of every poultryman and hog raiser. This almost magic glass, not a temporary substitute, will transmit a liberal portion of the vital Ultra-violet sun's rays. Without these rays or else very expensive medicinal substitutes, poultry husbandry can not succeed, nor can little pigs grow and thrive.

High Cost Feed Unnecessary

Though only a medicinal substitute for Ultra-violet light, 37 quarts of Cod Liver Oil (estimated cost $45.00) is required for a 500-bird flock per winter. This estimate is based on the standard ration of ½ Cubic Centimeter per bird per day.

Vita Glass Inexpensive

The cost of Vita glass to bring equal results in vitality and egg production is surprisingly low. For a 20′ x 60′ building (1 Sq. Ft. of glass for each 12 Sq. Ft. of floor area) will cost extra for Vita glass, about $35.00 over ordinary glass. At 10% annual interest and depreciation, the result is ½c per bird per winter. *Vita glass is guaranteed to have a permanent transmission of 50% Ultra-violet light.*

Sun's Rays Are Best

Let your flock and your farrowing sows bathe in a constant supply of natural Ultra-violet rays from the sun through Vita glass.

No danger of over-dosage by high-priced mercury-vapor or Cooper Hewitt lights.

Powerful Germicide

The invisible short wave lengths of Ultra-violet rays admitted through Vita glass are the most powerful germicide known. Use Vita glass to supplement disinfection, sanitation and cleanliness.

Glass Substitutes Ineffective

In a desperate attempt to provide Ultra-violet rays, and also to keep chicks, hens and little pigs protected from the weather, millions of feet of various glass substitutes have flooded the market. Cloth and wire filled with cellulose or paraffin products, seldom last over one or two years, and at best provides a small percentage of the rays which pass through Vita glass.

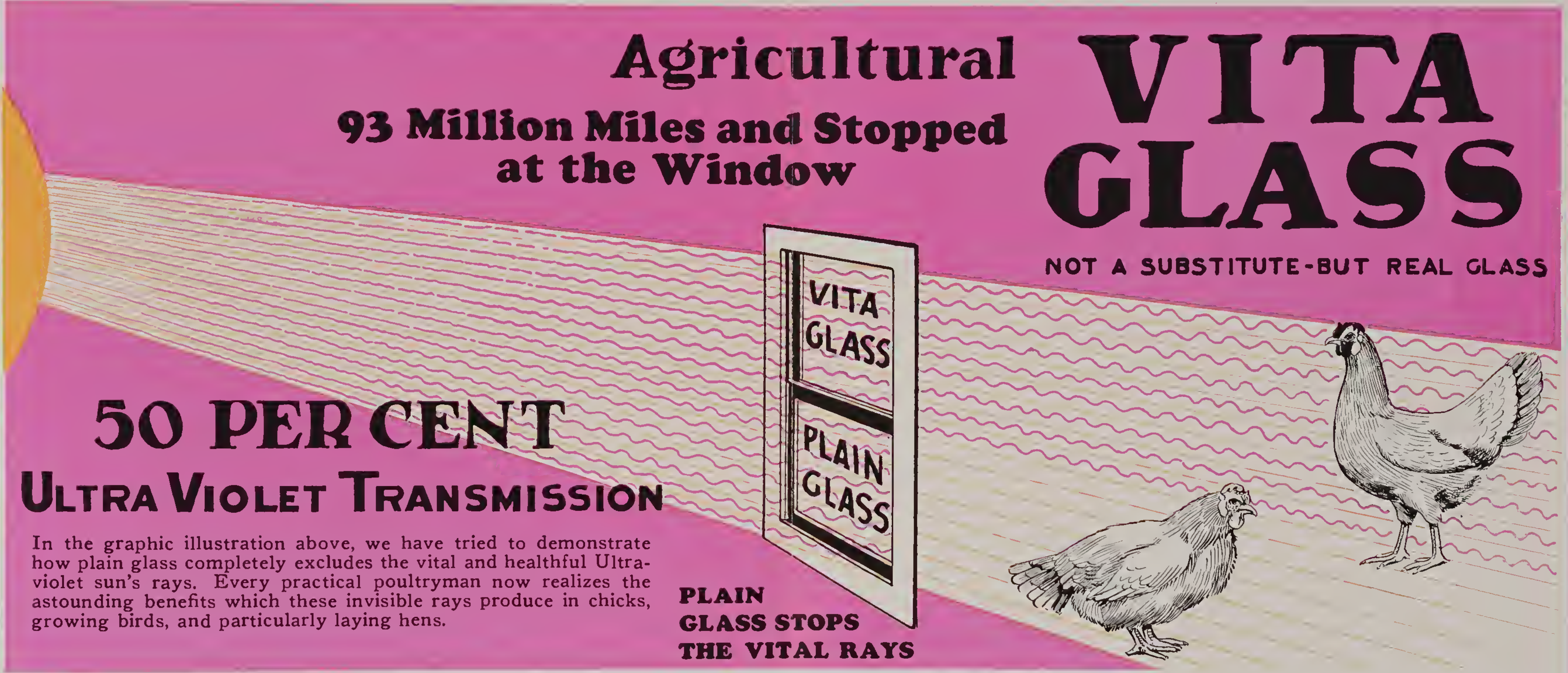
Muslin Fronts a Makeshift

Little chicks and birds in heavy production suffer in vitality and tragic reductions in eggs occur when exposed to sudden drops in temperature. These disastrous consequences of fickle weather are an invariable factor with muslin fronts, or open south wall poultry houses.

Agricultural VITA GLASS

93 Million Miles and Stopped at the Window

NOT A SUBSTITUTE-BUT REAL GLASS

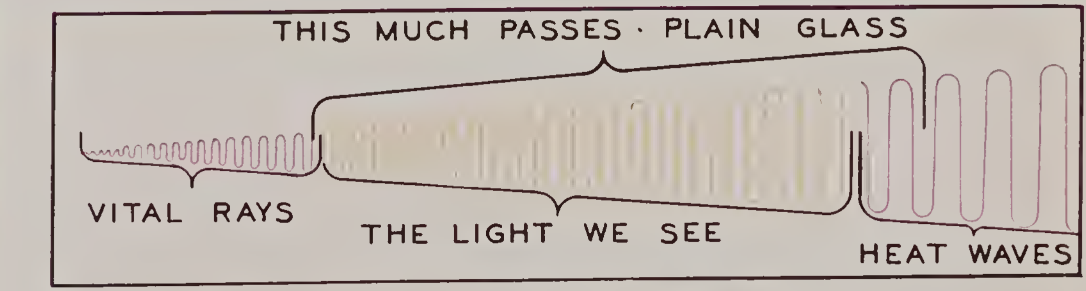


50 PER CENT

ULTRA VIOLET TRANSMISSION

In the graphic illustration above, we have tried to demonstrate how plain glass completely excludes the vital and healthful Ultra-violet sun's rays. Every practical poultryman now realizes the astounding benefits which these invisible rays produce in chicks, growing birds, and particularly laying hens.

PLAIN GLASS STOPS THE VITAL RAYS



The chart at the right strikingly demonstrates the results from a carefully conducted test. Many other tests conclusively prove the benefits of Ultra-violet light.

Record Test—Kansas Experiment Station

Lot A, B, C	A	B	C
Treatment —	Ultra-Violet Quartz Lamp	Direct Sunshine	Sunshine Thru Plain Glass
Eggs Per Bird Nov. to June	123	136	117
% Hatchability	72%	75%	53%

Vita Glass gives complete sunlight without weather exposure.

The Only Difference Ultra Violet Light

(Left) Well-developed young birds supplied with plenty of ultra-violet light.

(Right) Remnants of a pen, originally the same as the one shown at the left, the only difference being that this group received no ultra-violet light, all the light coming through window glass.

HOG HOUSE ROOF WINDOWS

Ample sunshine, including Ultra-violet rays, is one of the single greatest factors in raising little pigs. Better health and disease resistance are a natural result of daily sun baths beneath Vita glass. This is especially true in the size and solidity of bone formation. These vital rays are a necessity for sturdy little pigs. Use Vita glass. With this remarkable material you can safely raise early Spring litters.

ADD MORE WINDOWS—USE VITA GLASS

Look over your buildings, because they too, like thousands of other barns, hog houses and poultry houses, need more bright sunshine. CLAY Roof and Side Wall Windows equipped with Vita glass are just the thing you will need. The cost is surprisingly reasonable.

KEEP VITA GLASS ON HAND

For poultry houses especially, many careful poultrymen keep Vita glass ready to replace broken lights. Once installed, Vita glass is much stronger than ordinary glass.

SIZES AND PACKING

Agricultural Vita Glass is sold at a very low price subject to a few minute air bubbles and slight surface ripples. It is packed 50 or more Sq. Ft. per case. We can supply broken cases at an extra NET charge of 50c for the lot. Vita glass weighs about 21 oz. per square foot.

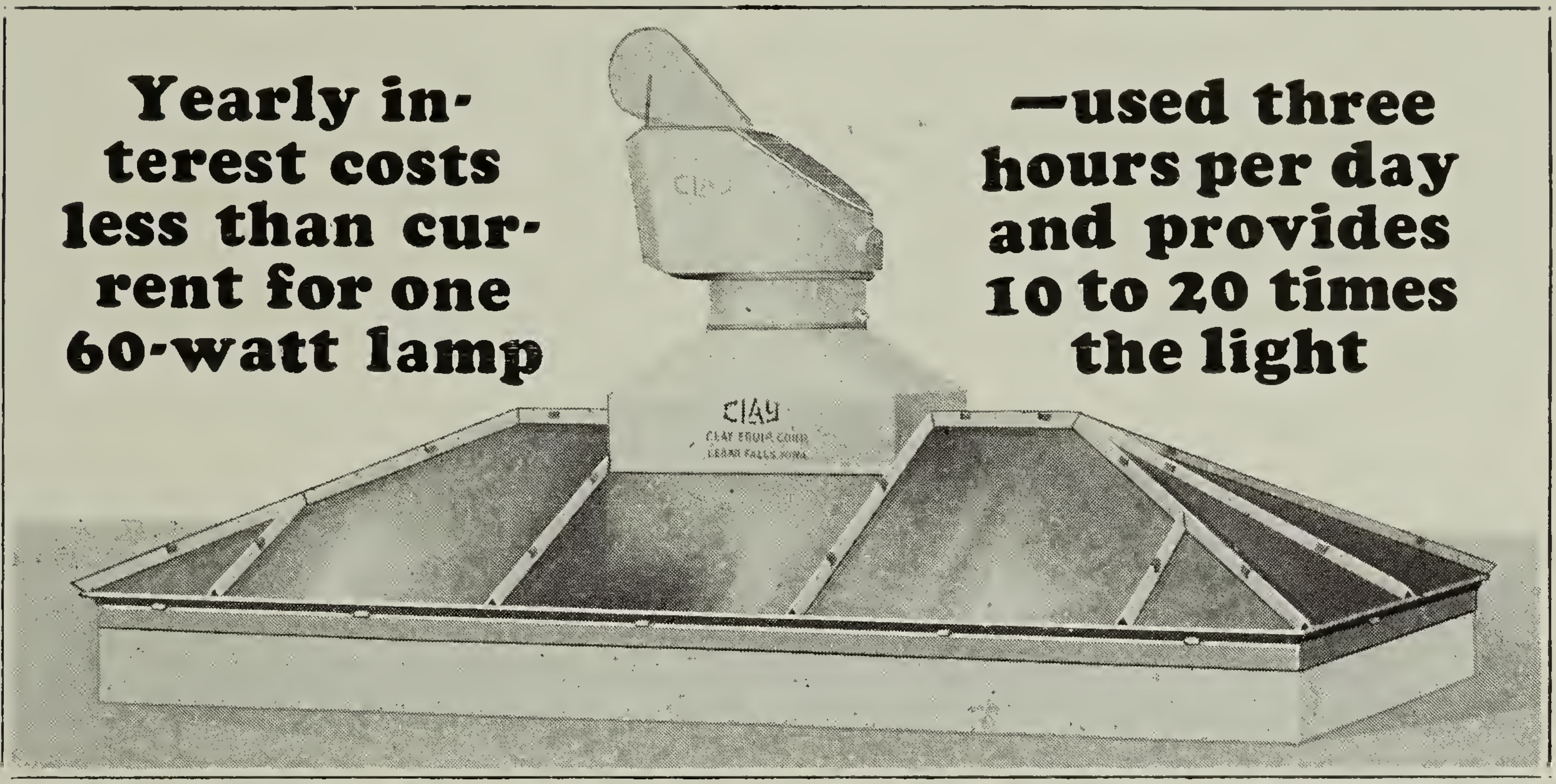
WOOD SASH SIZES	
Size	Lights Per Case
8 x 12 In.	75
9 x 12 In.	67
10 x 12 In.	60
9 x 14 In.	57
10 x 14 In.	51
12 x 14 In.	43
12 x 16 In.	38
12 x 20 In.	30
12 x 30 In.	20
12 x 36 In.	17
12 x 40 In.	15

CLAY WINDOW SIZES		For Window Patterns
Size	Lights Per Case	
10 x 28 In.	24	**HW163** and **HW164**
20 x 28 In.	12	**HW154** **HW166** **BW20-28**
20½ x 30 In.	12	**WW20-30**
20½ x 36 In.	12	**WW20-36**

NOTE: Vita glass for windows BW20-28, WW20-30 and WW20-36 must be supplied at the factory with the metal trim, which is necessary in these windows and matches the frame and glass.

Prices: Ask the CLAY Dealer
Or Write
CLAY EQUIPMENT CORP., Cedar Falls, Ia.
Exclusive Distributors

CLAY SKYLIGHTS



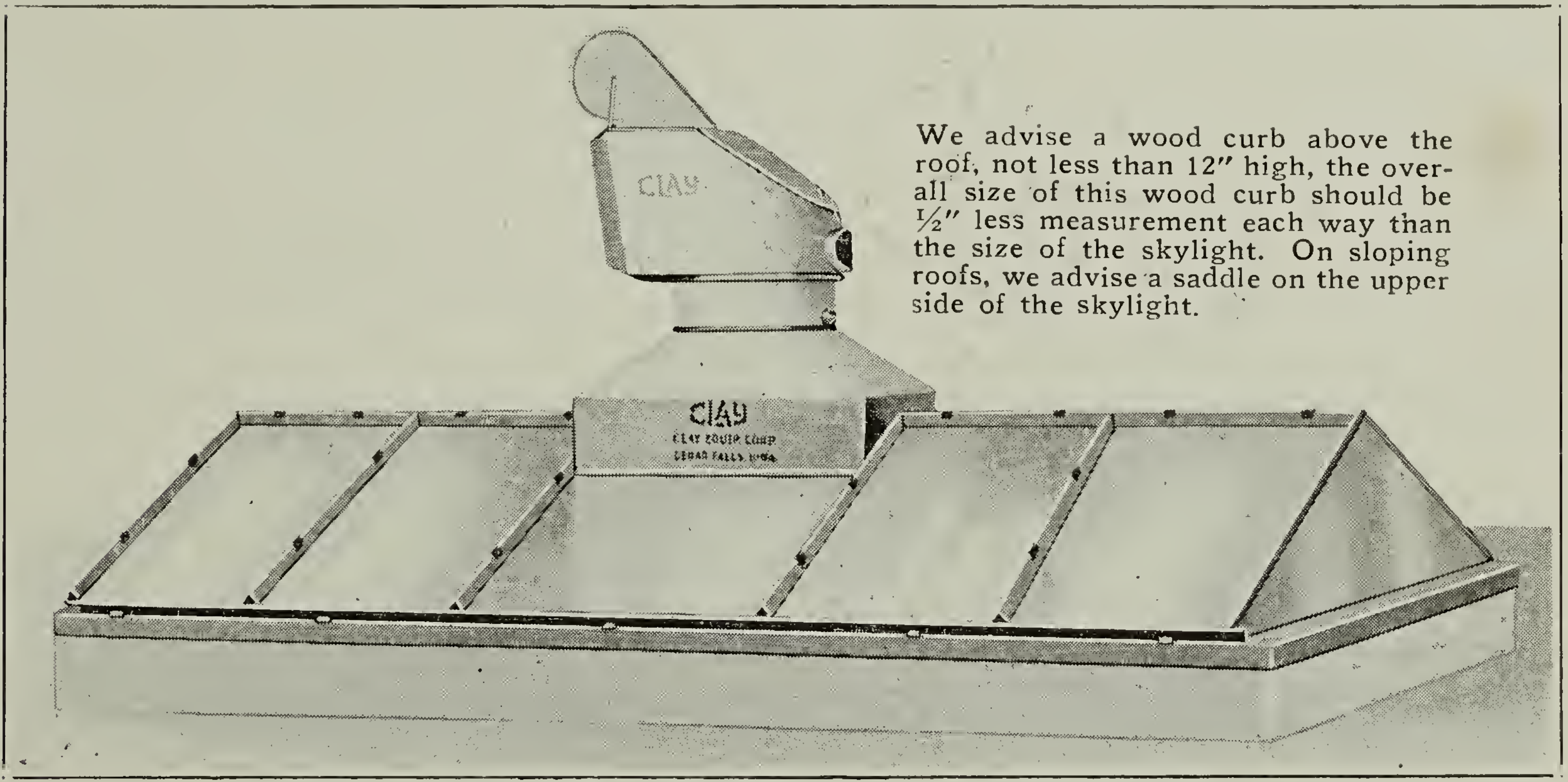
Yearly interest costs less than current for one 60-watt lamp

—used three hours per day and provides 10 to 20 times the light

HIP STYLE SKYLIGHT

With Ventilator **HSLV**, Without Ventilator **HSL**

Suitable for warehouses, stores, offices, office buildings, schools, and factories. In no way can large rooms be so satisfactorily and so cheaply lighted. CLAY Skylights are puttyless, and each side and the bottom of every glass has a condensation gutter. Metal caps over the glass edges are secured by copper clips. Either style shown on this page can be supplied with 12″ 15″ or 18″ ventilators. 12″ is supplied unless otherwise mentioned. This ventilator has a damper, and the damper should always be operated by a small cord, which in case of fire will burn off, thus the damper closes itself.



We advise a wood curb above the roof, not less than 12″ high, the overall size of this wood curb should be ½″ less measurement each way than the size of the skylight. On sloping roofs, we advise a saddle on the upper side of the skylight.

GABLE STYLE SKYLIGHT

With Ventilator **GSLV**, Without Ventilator **GSL**

This style is the same as the hip skylight shown above, except that it has a plain metal end as illustrated.

STANDARD SPECIFICATIONS

Glass — 3/16″ factory ribbed, lights approximately 2′ wide.

Frames — 26 Ga. copper bearing steel for widths of skylight 5′ and less — for skylights over that, 24 Ga.

Curb — on skylights is 2″ high.

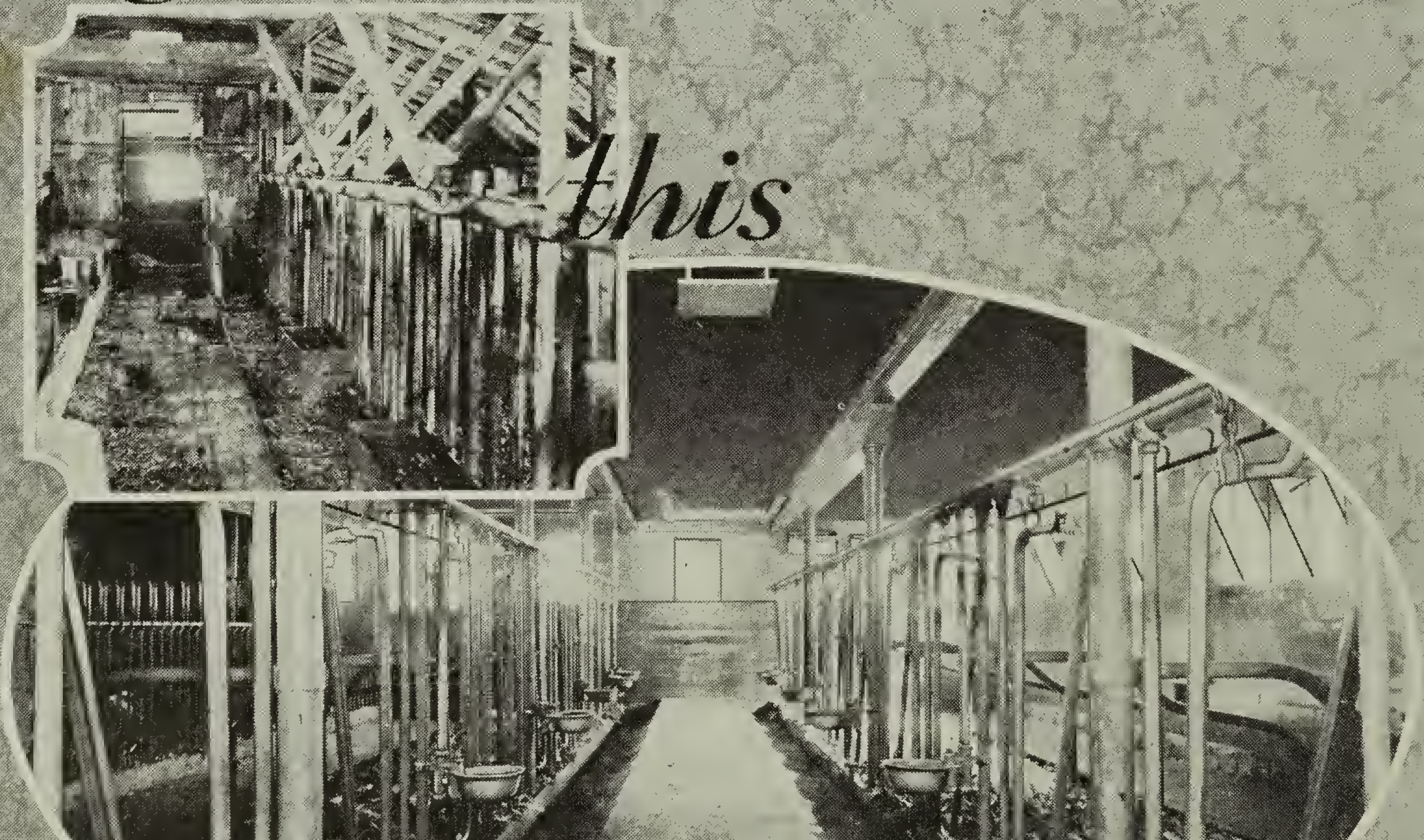
Pitch — 12″ run, 6″ rise.

Ventilator — Standard is 12″ revolving head on a ball bearing. We can supply 15″ or 18″ when so specified.

Sizes — Any size 3′ x 3′ up to 8′ x 12′. See Price List.

ALTERNATE: We can supply glass 1/4″ wired and ribbed. We can also supply frames and bars of heavier gauge metal or made from copper or Armco iron at a special price.

Do Your Cows Come Home to-



this

or this?

Best Investment You Can Make

IT IS not the farmer who works the hardest, nor the one who works the longest that makes the greatest profit.

It is the man who works the most intelligently that gets ahead. We all know men who work from the darkness of early morning to the darkness of the long night hours and yet do not seem to progress.

These men are working too hard. Their work rides them, harries them, enslaves them — leaves them not a minute's peace in which to sit down calmly to figure out how to do their work easier, quicker, better and far more efficiently. Right now is the time to calmly and seriously study farm work as related to profits.

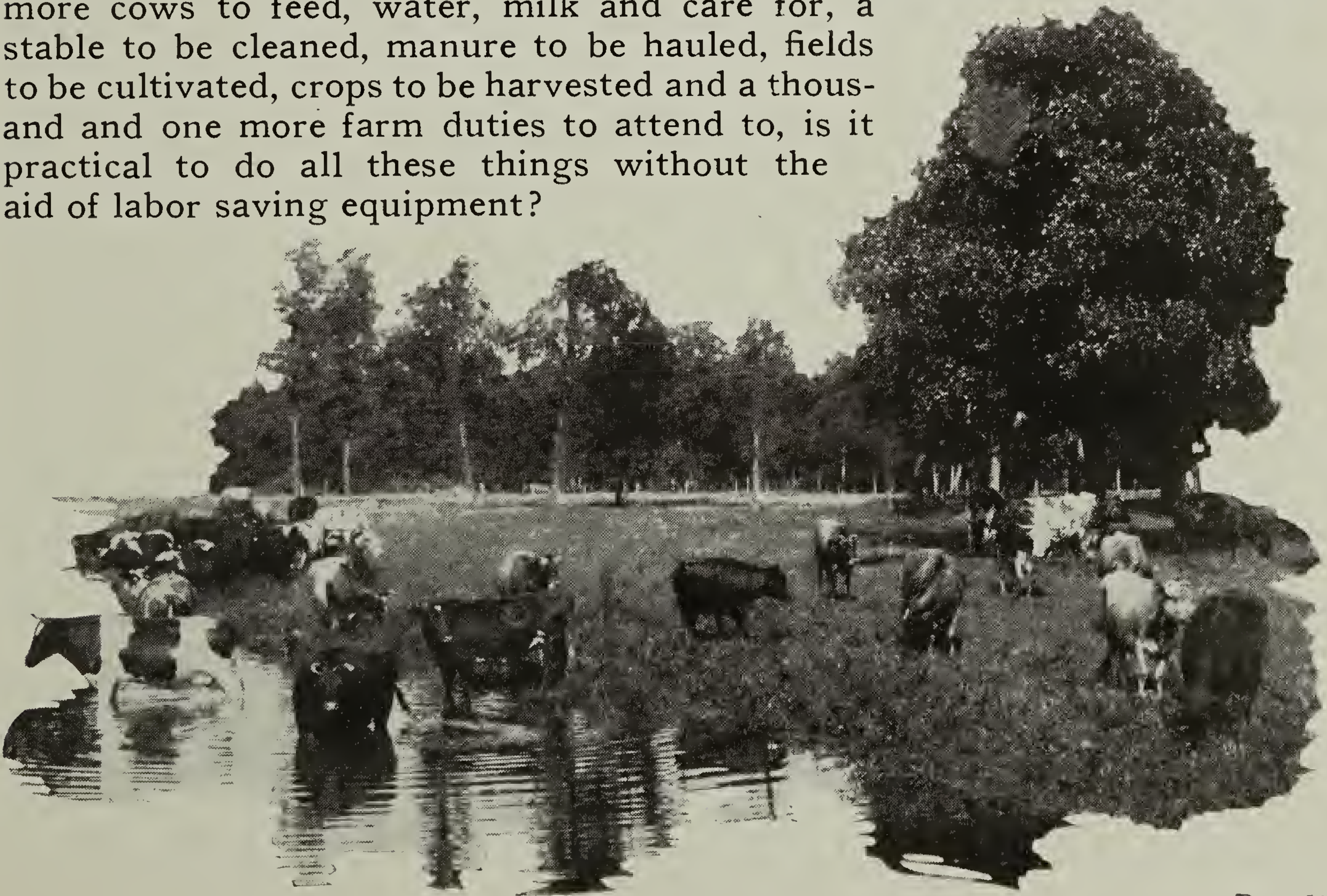
Every dairyman in this country who has been strugling along with an old out-of-date barn, and old patched up stable equipment feels that his work would be easier and his milk checks bigger if his herd were housed in a well arranged and equipped barn.

Farming today is highly competitive. Shrewd, careful planning to produce economically and sell profitably is the order of the day. Methods that worked in grandfather's day are now useless. The time is here when the old rigid stocks, the time wasting wheelbarrow, the ice rimmed, disease-breeding outside tank and all the other inefficient dairy stable paraphernalia of yesterday must make room for new labor saving, time saving and money saving equipment. For now you can equip your dairy barn with the very latest labor saving devices at so low a cost that you should not hesitate.

CLAY steel equipment, shown and described in this catalog combines all the essentials of good stable equipment — comfort, cleanliness, a saving of time, labor and money at a price so low that no progressive dairyman, in justice to himself, can any longer afford to do without it.

Equipment for Every Purpose and Every Purse

Plan now to have the equipment you need. Summer or winter, CLAY steel equipment will pay its cost quickly and many times over. With a score or more cows to feed, water, milk and care for, a stable to be cleaned, manure to be hauled, fields to be cultivated, crops to be harvested and a thousand and one more farm duties to attend to, is it practical to do all these things without the aid of labor saving equipment?



Cow Comfort Supreme

A stable equipped with sanitary CLAY equipment not only keeps your cows in good health, but makes your stable work easier.

CLAY stalls and stanchions are built strongly—they are durable. They are designed to give each cow the utmost comfort, yet keeping her securely tied in her place. No crowding over, or even stepping on her neighbor's udder as so often happens in the wood equipped, old style stable.

Feeding can be made easy with a CLAY feed truck — even a boy can take care of this work when the rush field work is on.

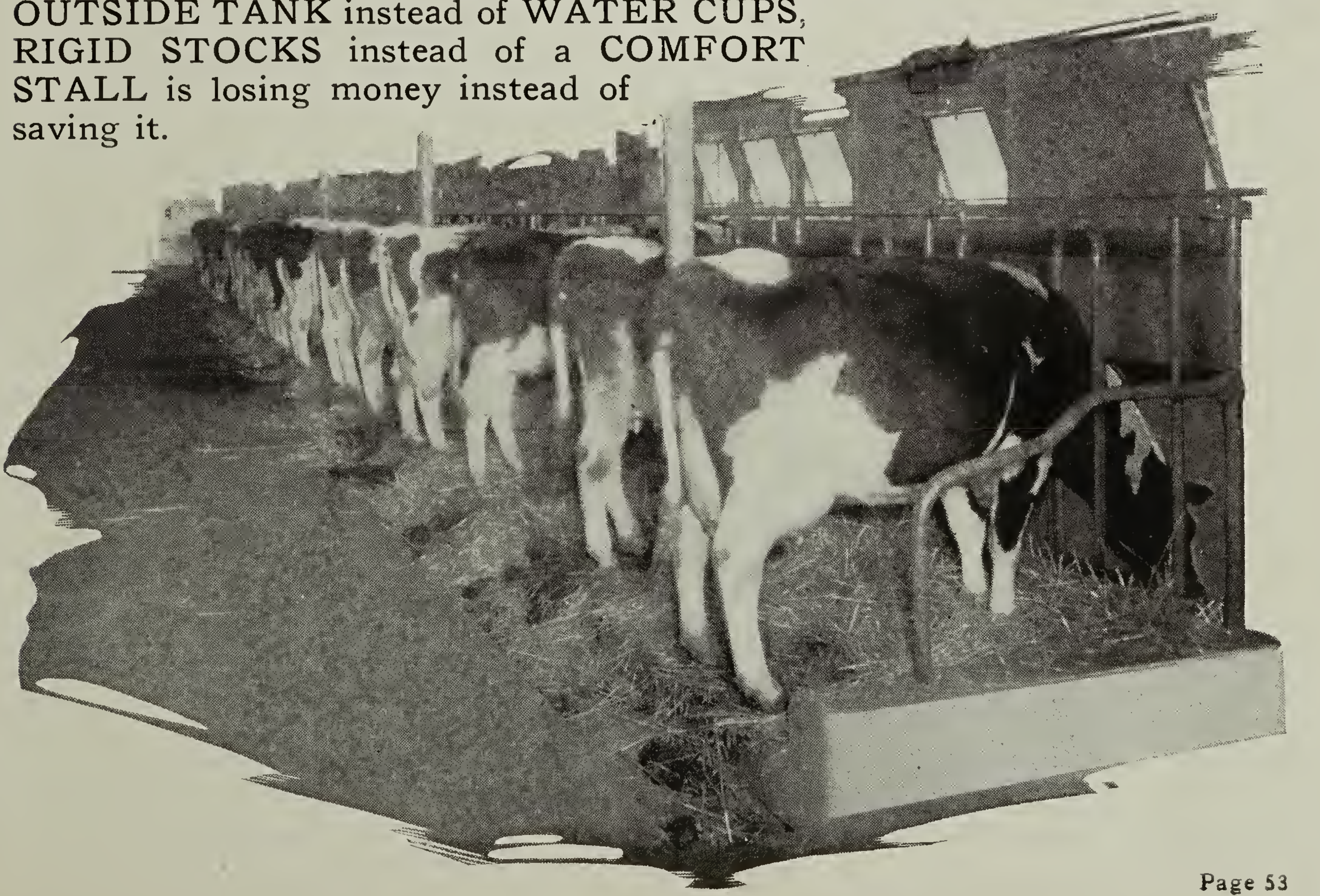
The large CLAY litter carrier holds five times as much as a wheelbarrow. It makes short easy work out of a hard disagreeable task that only a husky man could do the old way.

Perhaps the biggest time and labor saver, and without question the biggest money maker for the dairyman, is the individual water bowl. A drinking bowl system not only does away with a lot of time killing labor and expense, but it actually pays for itself in less than three months time in increased milk yield. After the cups have paid for themselves they keep right on saving and earning money for you without the expenditure of a cent for as long as your barn stands.

If you build a new barn or remodel an old one get in touch with us before you actually start work. Let our field man call, and without obligation, help plan your arrangement and equipment with you. They have years of experience, they have planned literally hundreds of dairy barns the country over. They know what arrangement will be to your best advantage.

It is quite natural that you fondly hope your new barn and its arrangement will, when finished, stand as a monument to your progressiveness, but remember without careful planning it may result in galling drudgery from the very start.

Plan to remodel or build and equip your barn now. The Farmer who needs equipment pays for it whether he buys it or not. There are two kinds of economy — true and false. The man who does without needed equipment is practicing false economy. The man who gets along with a WHEELBARROW instead of a CARRIER, a BASKET instead of a FEED TRUCK, an OUTSIDE TANK instead of WATER CUPS, RIGID STOCKS instead of a COMFORT STALL is losing money instead of saving it.



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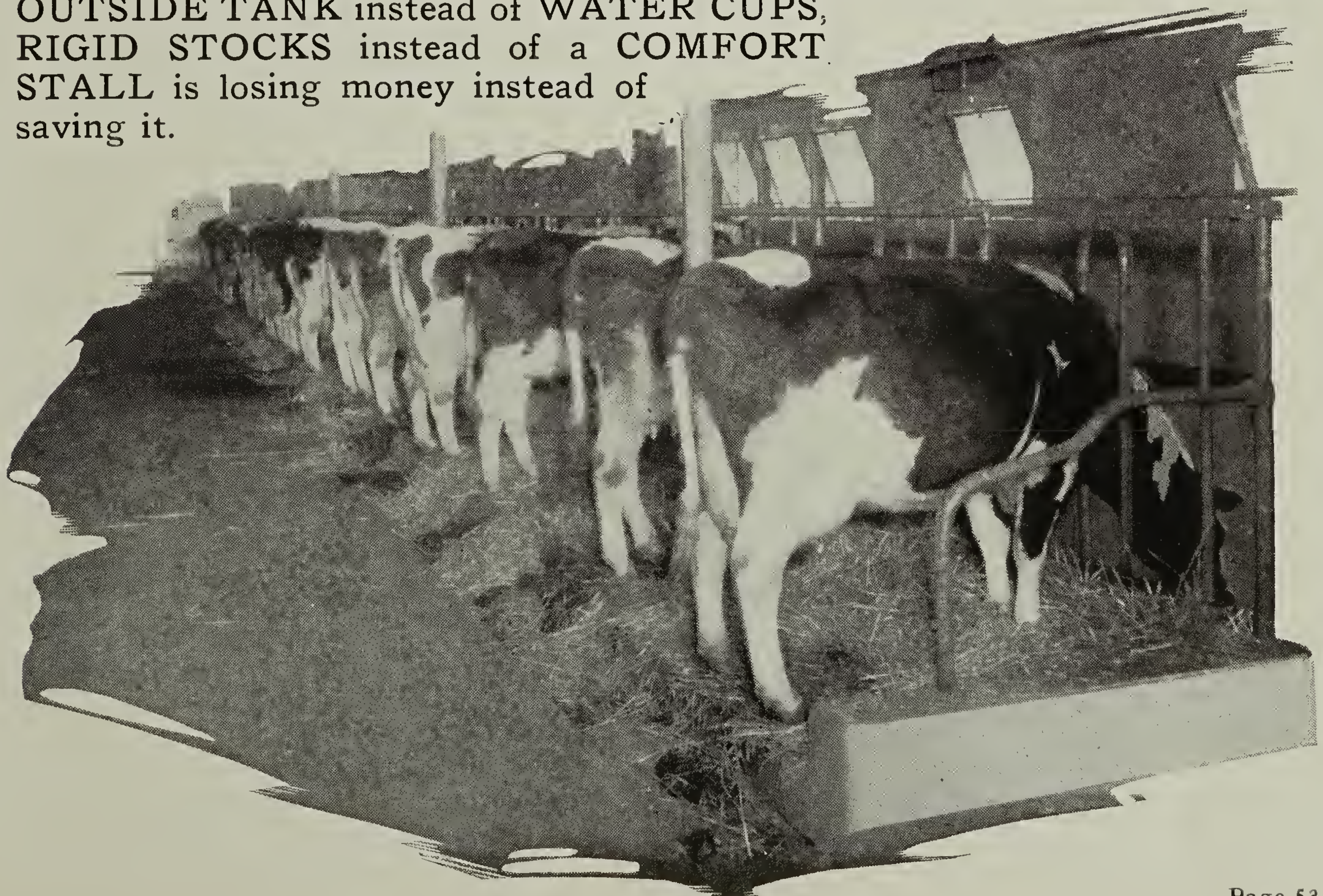


Laboratory Tested Galvanizing

IN supplying galvanizing on barn equipment, we are applying the same finish that we have used for many years so successfully on steel farm gates. We have also added a scientific method of testing this finish. This laboratory testing duplicates the oxidization of the atmosphere that would equal 15 to 20 years outside exposure. This is an assurance to you of a real rust protection for many years.

Twenty-Three Years Practical Experience

CLAY Galvanizing is not a new, untried experiment, but is backed by twenty-three years' practical experience. No other firm in the equipment business can point with pride to such a favorable record.

In working out the technical problems of galvanizing, our foremen and our workmen are trained by many years of faithful adherence to rigid standards. Get the very best from the manufacturer WHO KNOWS HOW.

Two Processes

CLAY system uses both "hot dip" and "electro plating" of zinc, each one having its special advantages, and each method used where its merits are supreme.

Hot Dip Galvanizing

This name Hot Dip comes naturally from the fact that the parts are emersed in a tank of melted zinc metal. Its particular advantages are a heavy coating, though this coating with hot dip is never entirely pure zinc. Hot dip also provides complete covering both inside and outside of castings. Hot dip has a high almost shiny finish as compared to zinc plated which has a satin silver finish.

Electro Galvanizing

The electro process is simply electro plating in huge batteries through which is passed a heavy electric current. Zinc is dissolved in the solution, and put on to the steel exactly the same as silver is plated on a silver spoon. Its advantages are uniform thickness of coating and also chemically pure zinc, which is much more resistent to corrosion than metal with even slight impurities. It also forms a closer bond with the steel, and is smooth and even in appearance.

Each Method Used Where It Protects Best

The most important announcement in this, our No. 21 catalog, is the dual system of galvanizing equipment. Each part and piece of material is studied. and that system of finishing most applicable for that article is used.

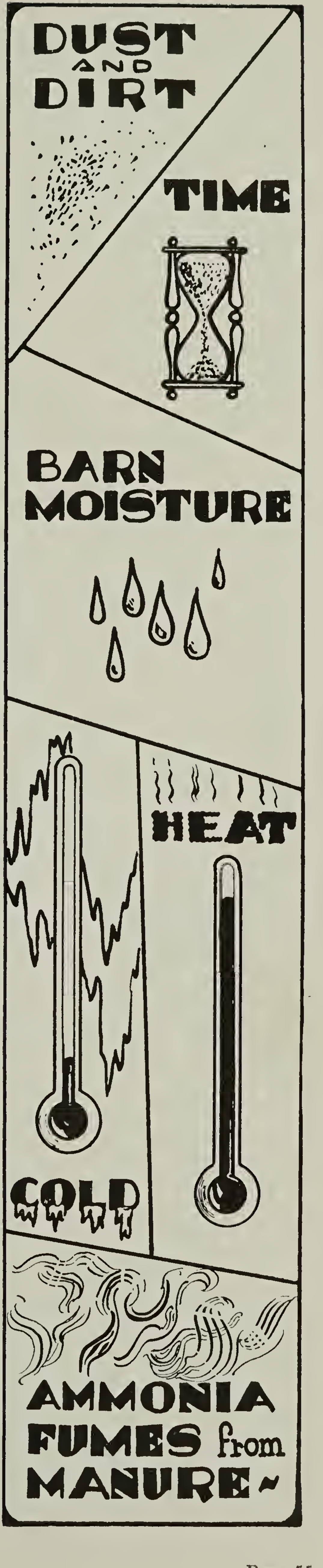
The CLAY EQUIPMENT CORP. is the only firm who can give you this dual and superior method. Some firms boast of hot dip galvanizing. Some firms boast of electro plating. It will be our policy to use both. Electro plate all plain parts, such as pipe and rods, but on articles of irregular shape or with depressions, use hot dip galvanizing.

Galvanizing Endures

No matter what kind of an article you may purchase, if it is made from that greatest of all structural materials, Steel, the finish is of vital importance. Rust and corrosion destroy millions of dollars worth of useful steel articles yearly. This insidious enemy, tireless and aggressive, works at this devilish task night and day, months and years without end. The ordinary conditions of the dairy barn help, rather than hinder, his inroads.

Since paint and baked enamel are temporary at best, why not turn to Zinc, that ideal metallic coating? It is harder, tougher, looks better, wears better and LASTS TEN TIMES LONGER.

To an astonishing degree, galvanizing resists the attacks which we have graphically illustrated at the right; Dust and Dirt — Time — Barn Moisture — Heat and Cold — and the Fumes from Barn Manure.



Zinc Friendly to Steel

Friendliness between metals is an odd but very appropriate way of putting it. Scientists, Chemists, Metallurgists, all know that rust on steel increases above the normal rate in the presence of certain materials, such as salt, cinders, etc. It decreases in the presence of zinc.

To illustrate this point, if you cut through a zinc covered steel sheet with a knife, the mark will not rust. If steel is covered with lead or many other metals, a cut mark through the covering metal will rust and rust faster than if the surface metal were not there. Zinc not only covers and protects, but retards rust near it.

Good Equipment Deserves A Permanent Finish

Everyone has seen the unfortunate results of paint and enamel finish on steel equipment. It isn't permanent because it is subjected to the severest conditions, and conditions that paint and enamel can not withstand. In fairness to yourself, buy equipment with a permanent rustproof finish. If you look closely at painted stalls or pens only a year or two old, you will find the rust works right under and lifts up a film of dried paint. The saddest part is that paint and baked enamel, once rusted, can never be later re-finished satisfactorily.

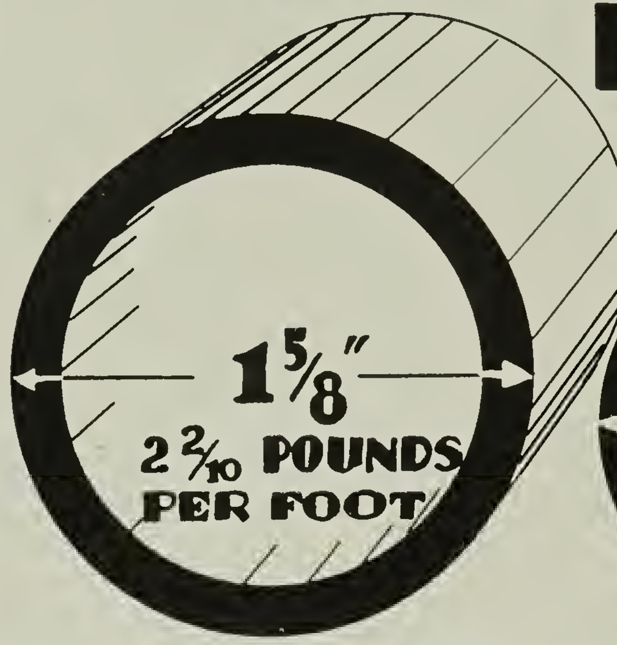
We Advise Galvanized Equipment

In conclusion, the question arises in your mind, "Is galvanizing worth while?" Yes, a hundred times, yes!, from the standpoint of beautiful and permanent appearance alone. If dollars and cents consideration only rules your judgment, the life of the equipment you buy urges us to strongly advise galvanized finish.

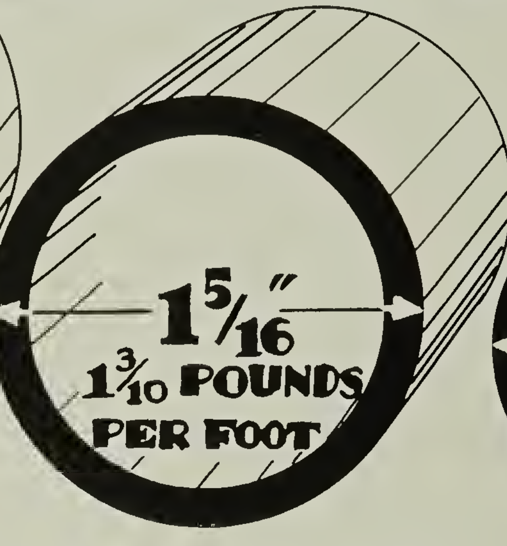
Why not buy equipment that will last many years longer, and will look well all the time? Why not buy from a firm with twenty-three years experience, the only firm who can give you both finishes, each where its particular use is most advantageous?

SPECIFICATIONS

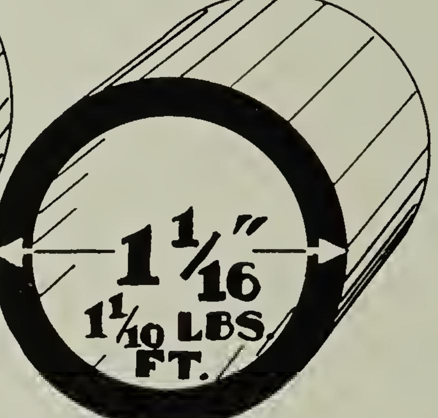
Barn Equipment



Cross section of the LOW CARBON welded seam tubing used on CLAY Stalls, bull pens, for both the frames, gates, arches and spindles, and calf and cow pens for posts, top and bottom rail, gate frames and arches.

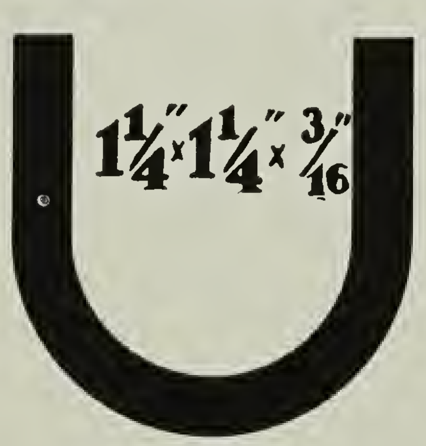


Cross section of the HIGH CARBON extra stiff brazed seam tubing used in CLAY S105 2-way stanchion.



Cross section of the LOW CARBON welded seam tubing used in all spindles of the CLAY Calf and Cow Pens.

We use HIGH CARBON extra stiff steel pipe in stanchion side bars, as well as in the famous CLAY Guaranteed Gates, that is, where great strength is the principal consideration. LOW CARBON welded tubing where the tubing meets the floor, and resistance to rust is the prime consideration.



Clay U Bar

Specially designed for use on stanchions. Produced on our own rolls at the steel mill. High Carbon steel and special shape gives maximum strength in stanchions. Weight 1.7 lbs. per foot.

Baked Enamel Finish

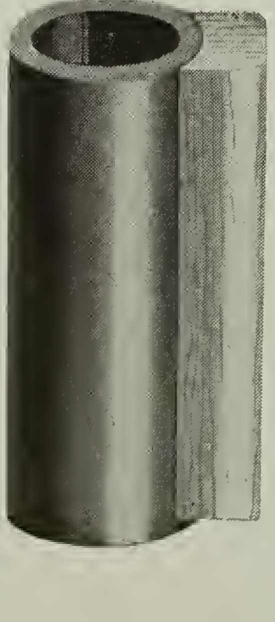
Is accomplished by first pickling pipe and steel parts. Sand blasting castings to remove grease, foreign matter or blue mill scale. Next we apply an inhibitive (that is rust preventative) grey enamel mixed in Copal gum varnish. This is baked on at 300° F. for two hours. Result: A hard, smooth and wear resisting surface.

Galvanized Finish

There can be no comparison between painted or enamel and galvanized finish. We strongly urge you to specify galvanized. That is electroplating on the pipe, hot dip galvanizing on castings. (For details see pages 54 and 55.)

Zinc Rustless Floor Sleeves

On rear legs of the stall partitions on every CLAY Stall is a zinc rust resisting sleeve at the cement line to stop corrosion at this critical point.

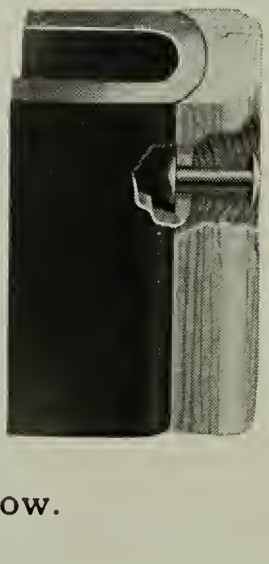


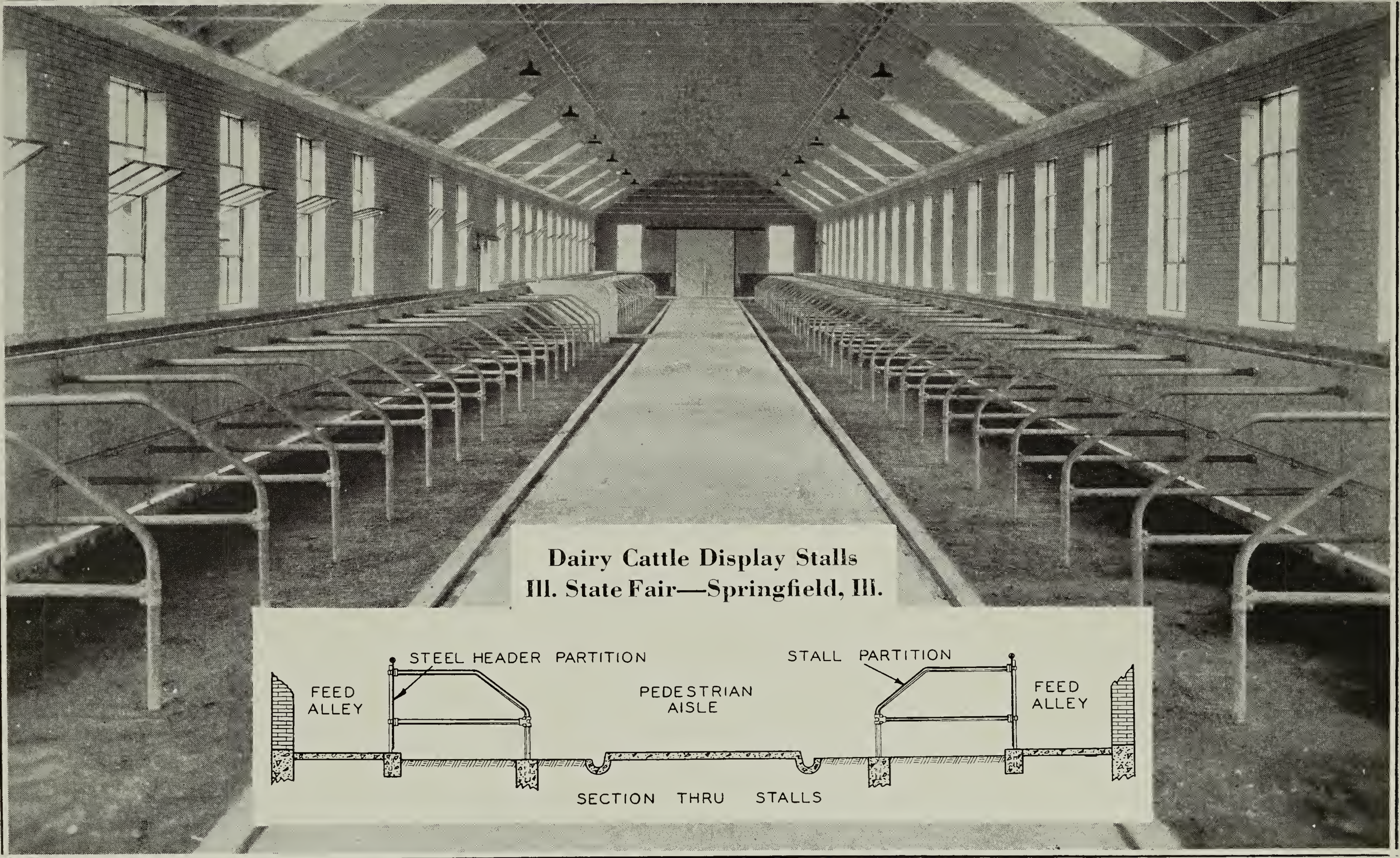
Castings

Only the best grade of tough malleable castings are used. We also use some STEEL castings where severe wear or heavy strains warrant its use.

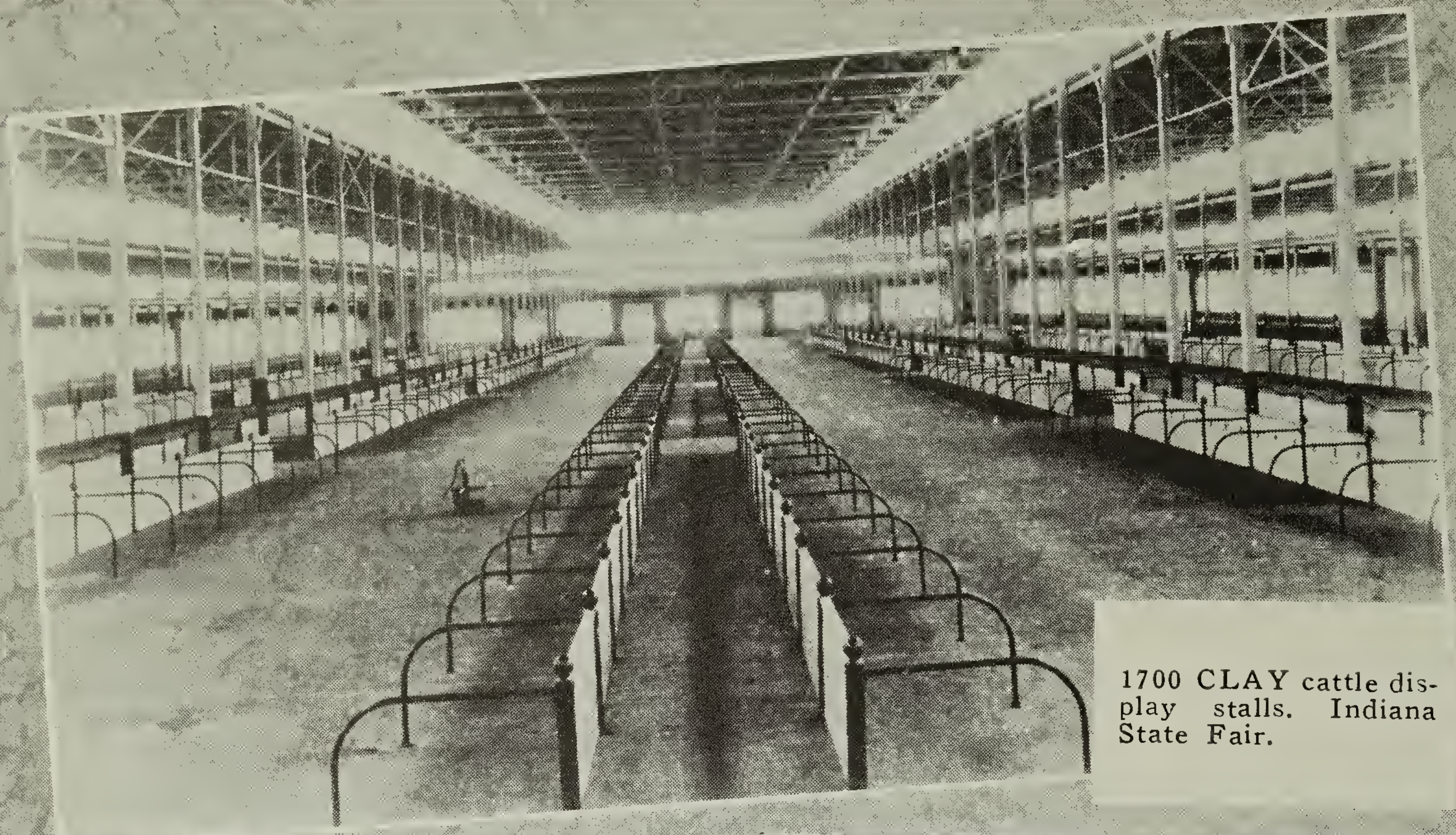
Wood Lining

CLAY Stanchion side bars can be supplied with smooth hard maple or birch lining. The wood is oiled and then attached by counter sunk head rivets, leaving the neck bars smooth and comfortable for the cow.

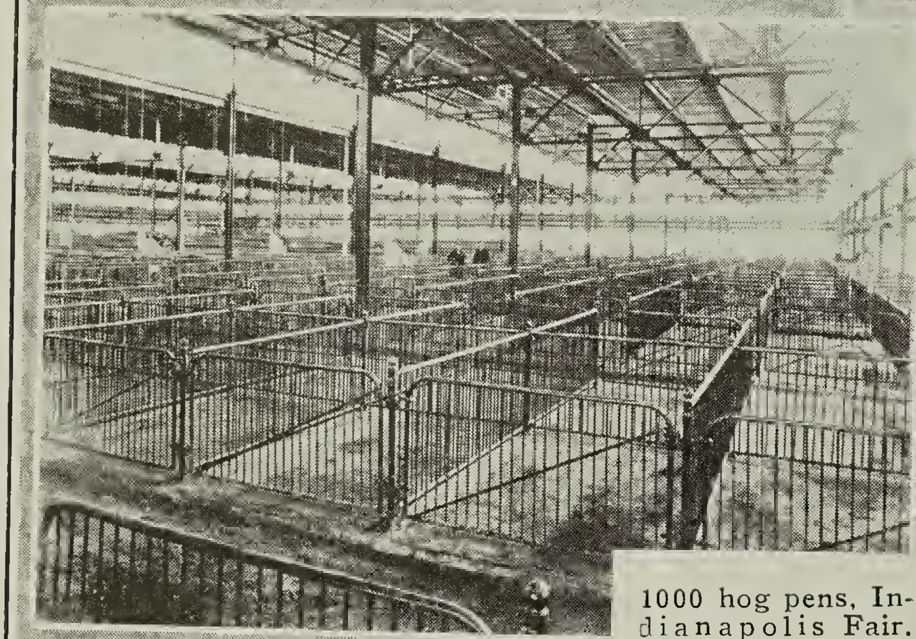




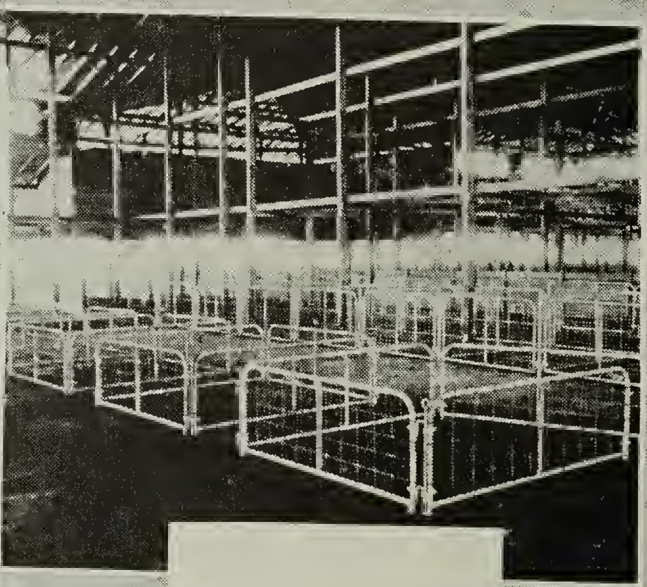
Dairy Cattle Display Stalls
Ill. State Fair—Springfield, Ill.



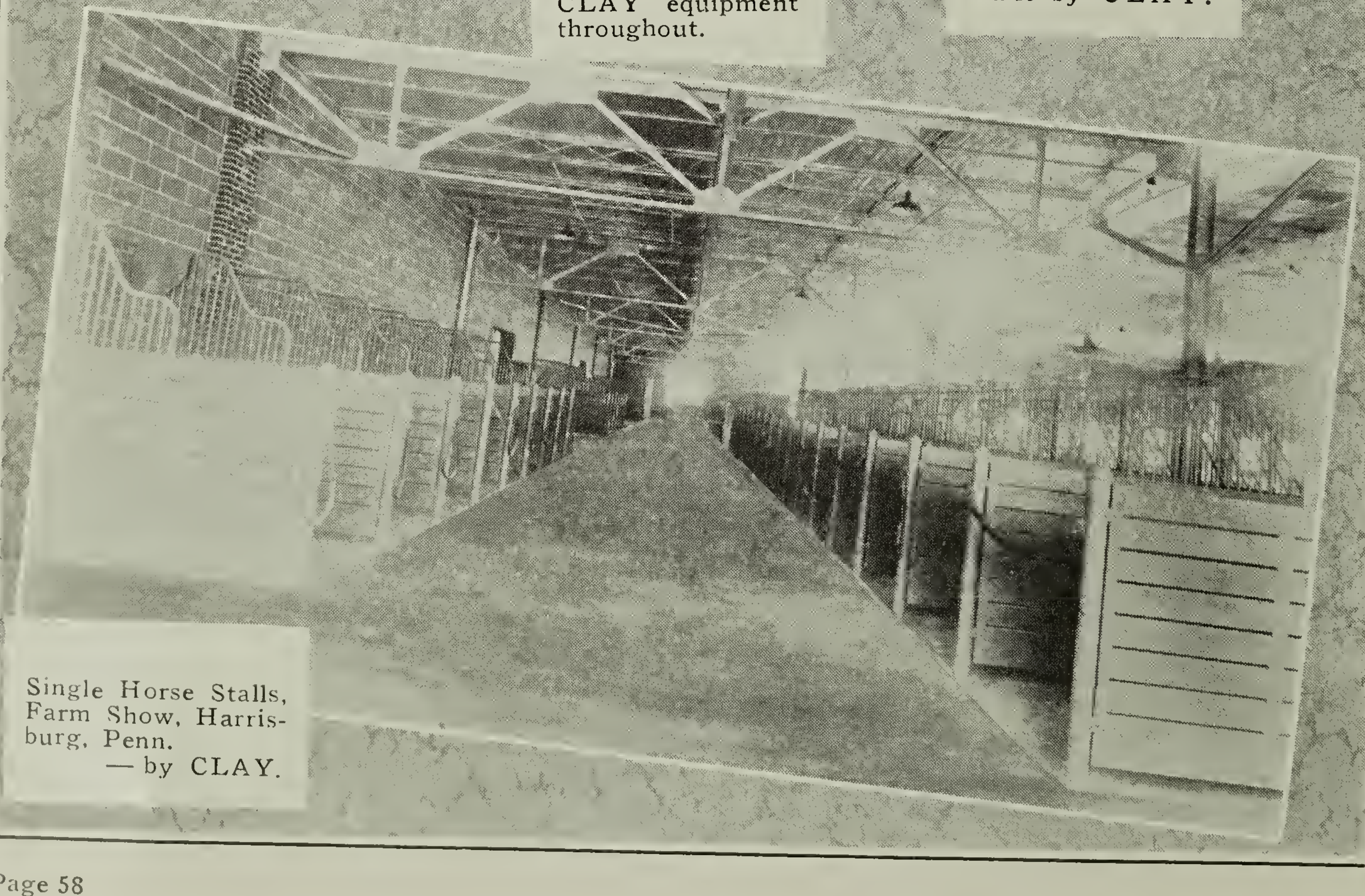
1700 CLAY cattle display stalls. Indiana State Fair.



1000 hog pens, Indianapolis Fair. CLAY equipment throughout.



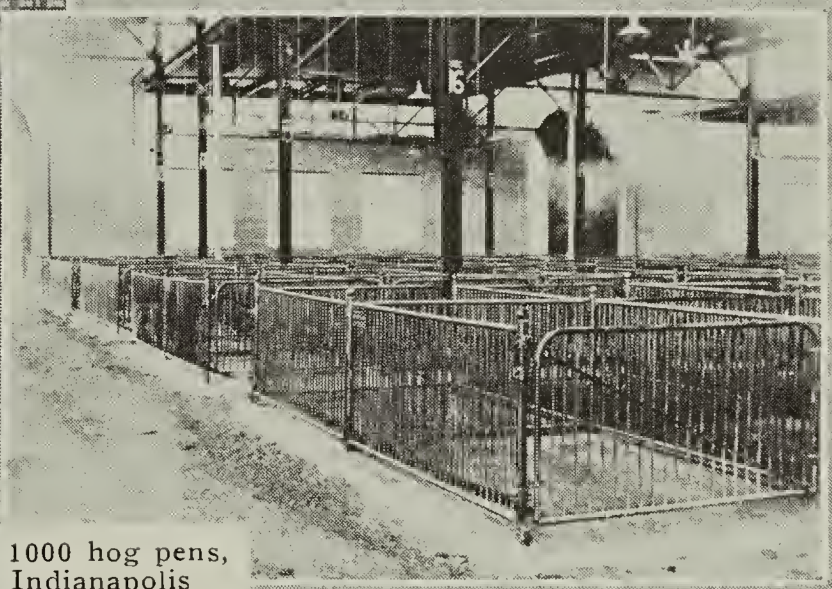
Movable judging pens, fair grounds, Aurora, Illinois. Built by CLAY.



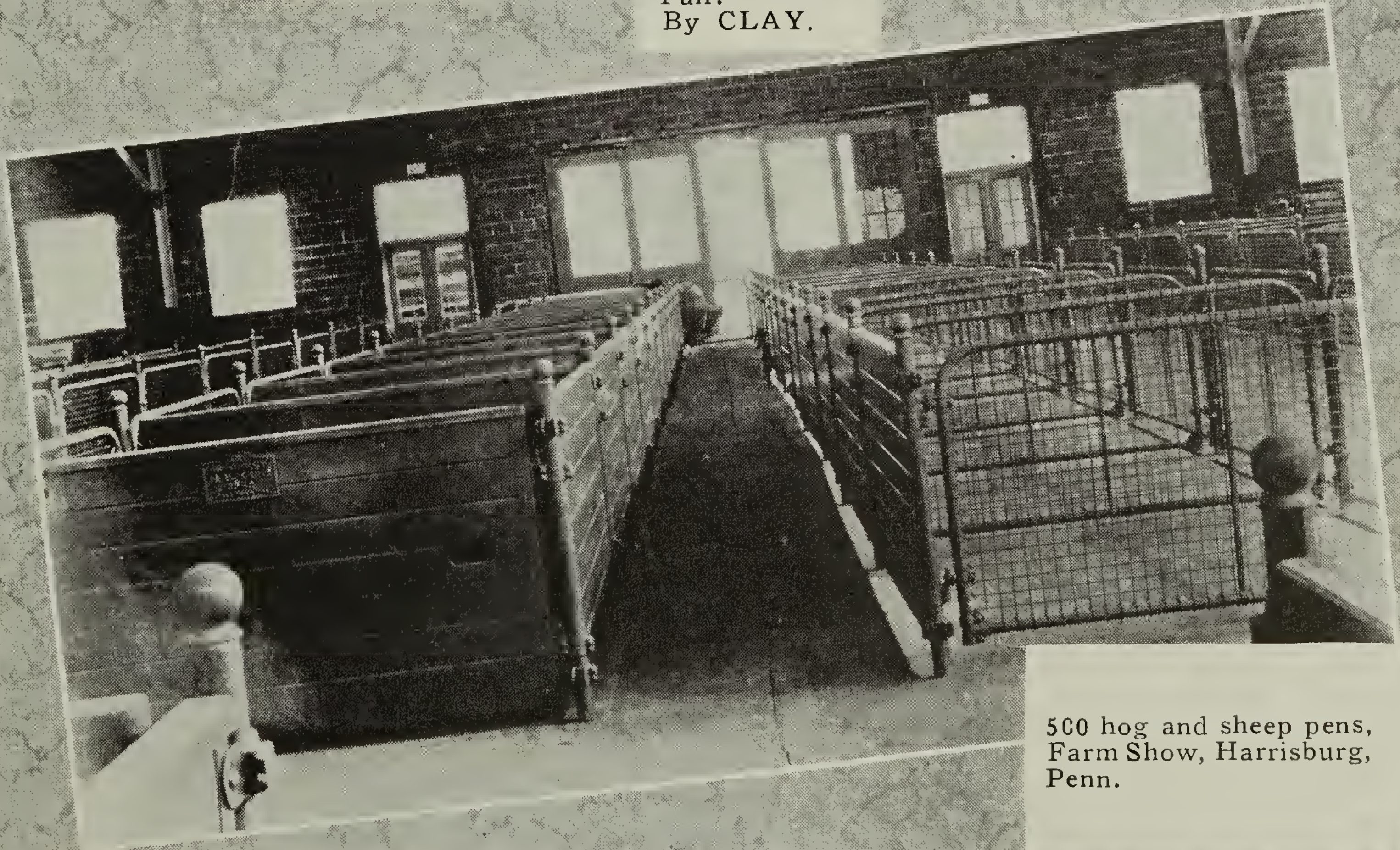
Single Horse Stalls, Farm Show, Harrisburg, Penn.
— by CLAY.

1800 removable cattle stalls, Ohio State Fair, Columbus, Ohio.
Another big CLAY installation.

525 galvanized hog pens, Central States Fair, Aurora, Ill.

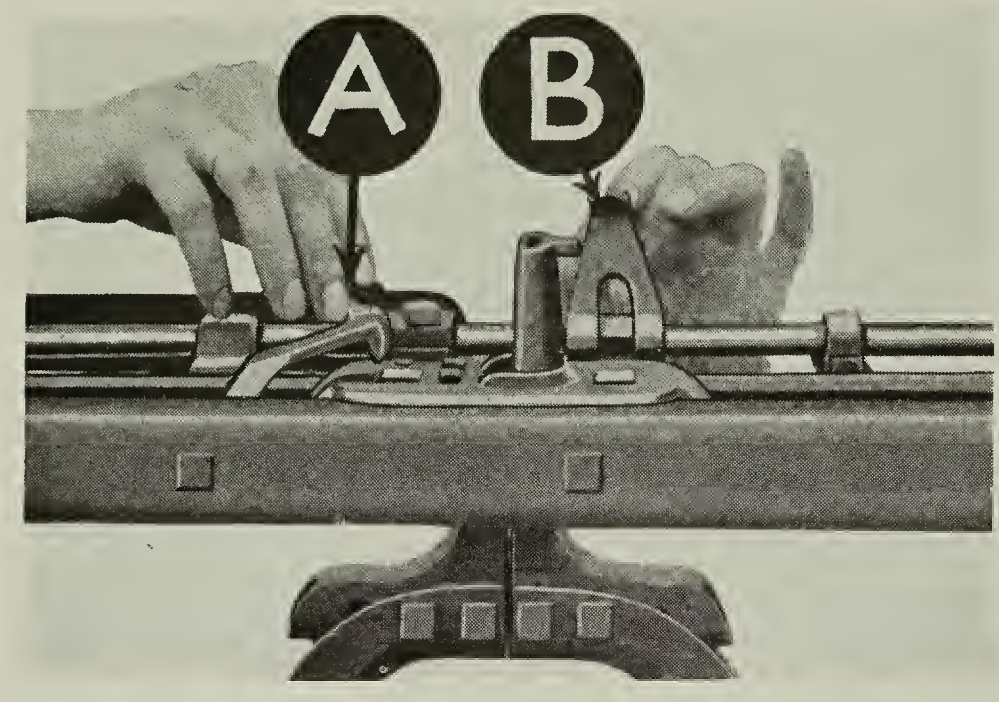


1000 hog pens, Indianapolis Fair.
By CLAY.



500 hog and sheep pens, Farm Show, Harrisburg, Penn.

NEW CLAY SIMPLIFIED LEVER STALLS



Above is illustrated the dual latches. When one cow is to be held and the others let out, first engage the hand latch "A" then release the lever latch "B", which is connected to the operating rod.

The top of the stanchion side bars are bolted securely to the castings. To adjust the neck width, release these bolts and adjust the stanchion side bars to the desired position.

When the hand latch "A" (only used occasionally) is out of use, it drops down between the two channel members out of sight.

The important and exclusive feature of the CLAY Lever Stall is EXTREME SIMPLICITY and RUGGED CONSTRUCTION. No cranks, gears, chains or complicated jim-cracks.

Easy to erect, convenient to use, permanent satisfaction. Hundreds of farmers are enthusiastic about lever stalls, because when milking is done, one pull on the lever releases the whole row. This also leaves the stanchions locked open, held rigid, in proper position for the cows to enter again. Could anything be more simple?

After the cows come back to the stalls again, one operation of the lever and all cows are stanchioned at once — a big time and labor saver.

In case of fire, quick release is a matter of utmost importance — a consideration not to be ignored.

Below: Holding one cow while lever operation releases all others, or single animal can be released independent of others.

PLS1 — Plain Lever Stall with stanchion, and anchor, no sure stop, no liners. 65 lbs.

PLS 1 WL — Same with wood liners. 66½ lbs.

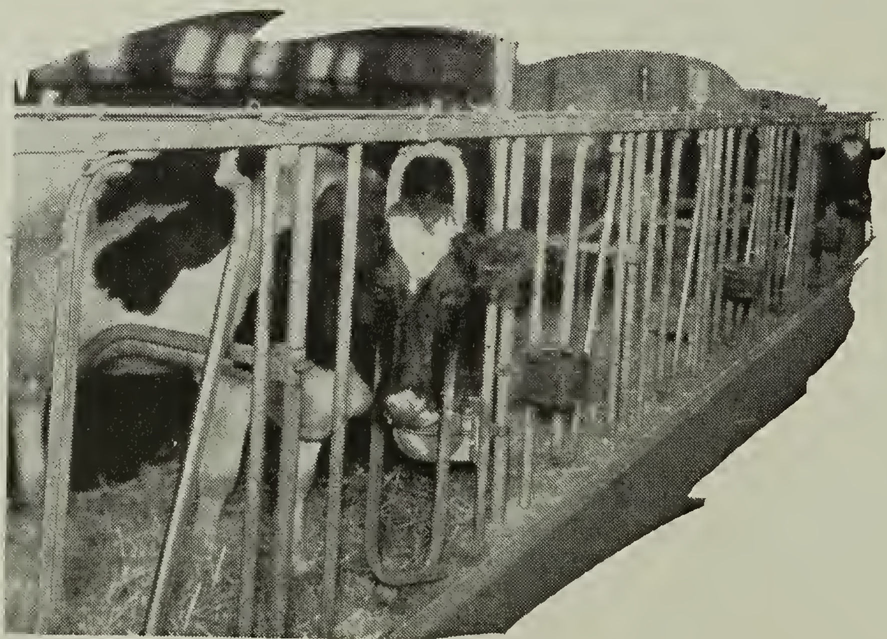
LSS2 — Extra for lever sure stop. 5 lbs.

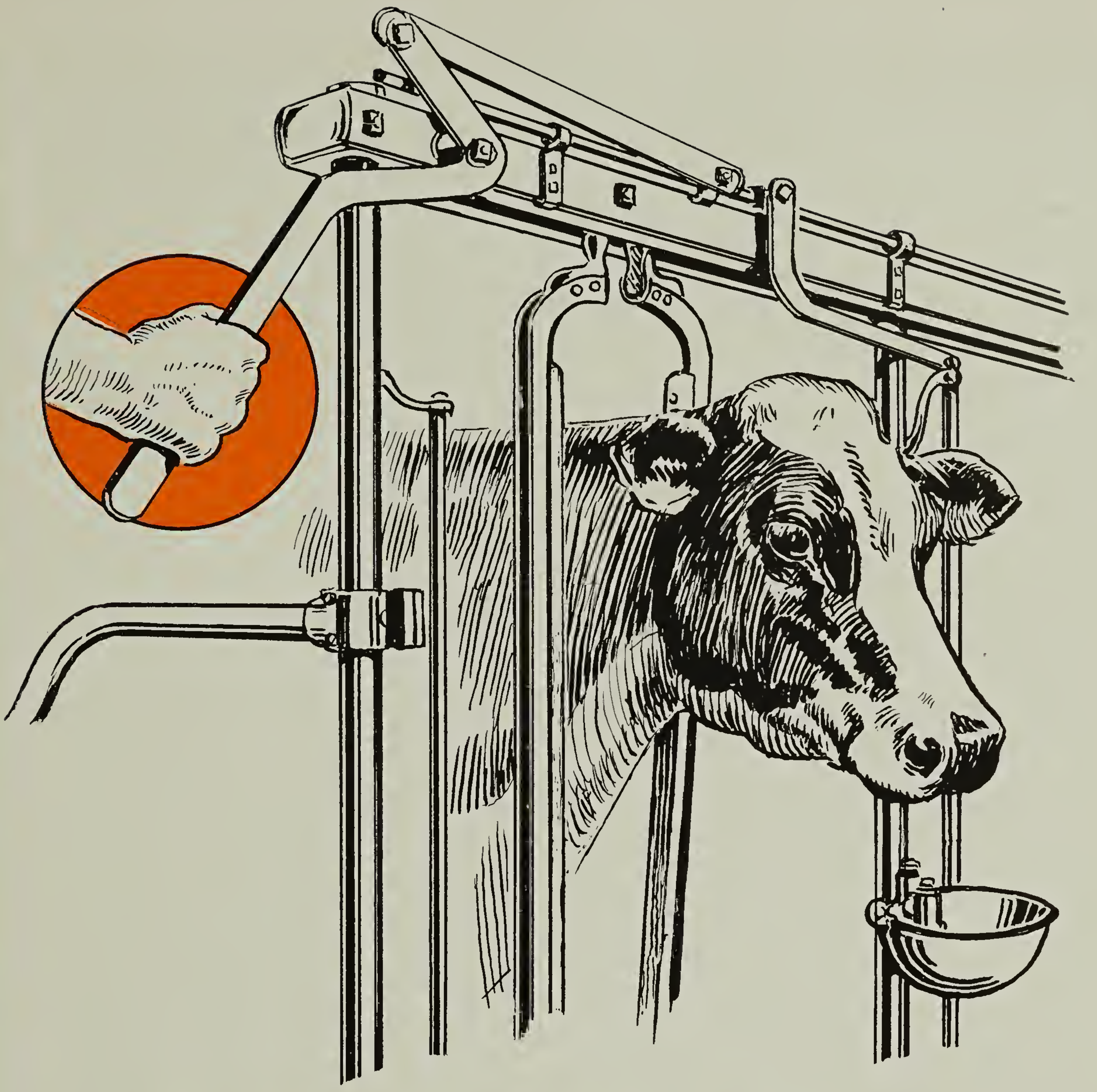
LS1S3 — Complete stall with lever sure stop and liners. 72 lbs.

SSS4 — Extra for sure stop on stanchion side bar per side. 2½ lbs.

PLS1A — Extra end of row section, plain. 23 lbs.

SLS3A — Extra end of row section with lever sure stop. 28 lbs.





Just Pull the Lever

Release the entire row quickly, quietly and easily. Indeed so easy and smooth is the operation of CLAY Lever Stalls a small boy can operate the lever no matter at what angle the cows may have their heads turned.

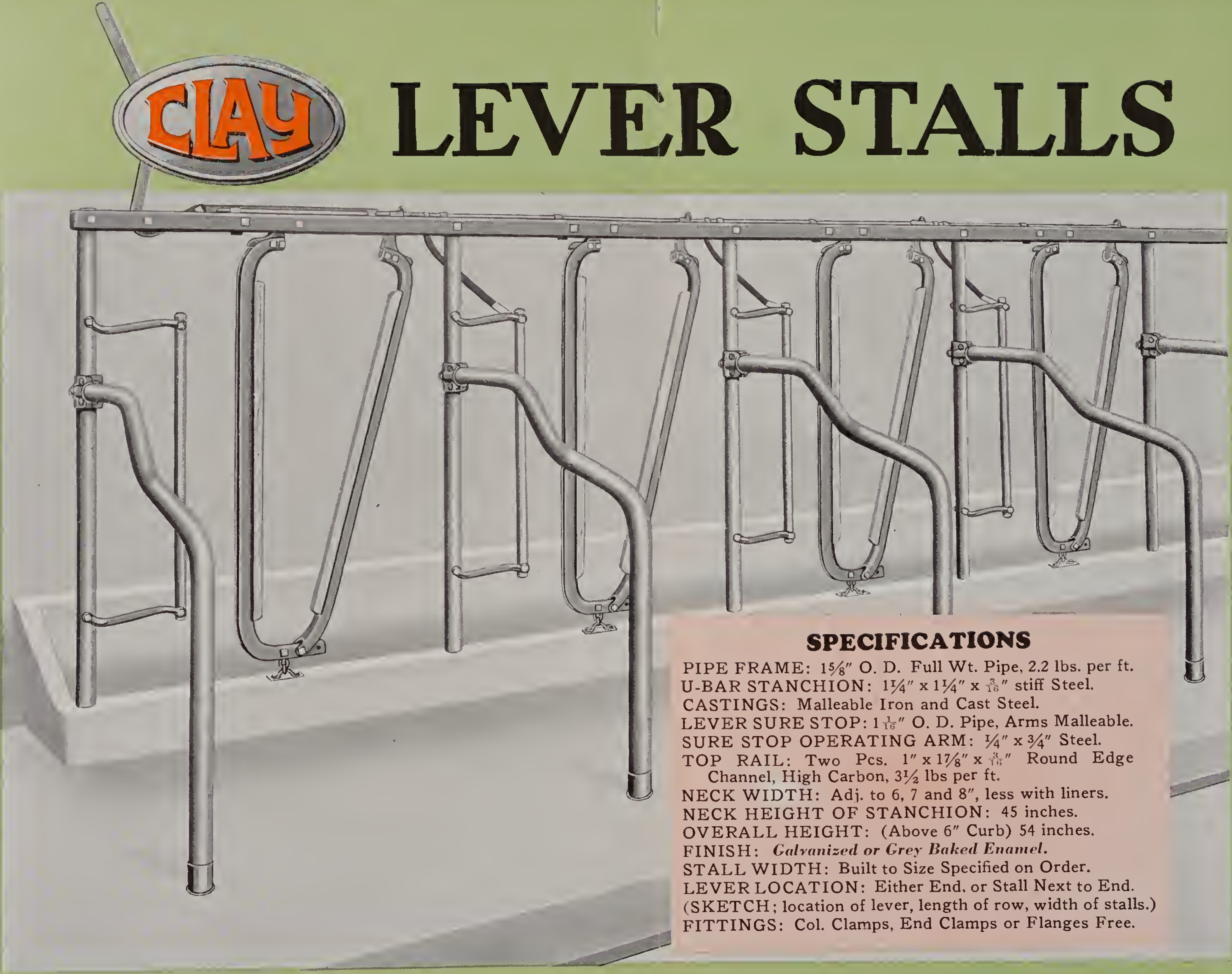
CLAY Lever Stalls make barn work easier. On rainy days when cows come in wet it is not necessary to go between them.

Safety to your herd is insured in case of emergency as all cows may be released instantly.

CLAY

LEVER STALL

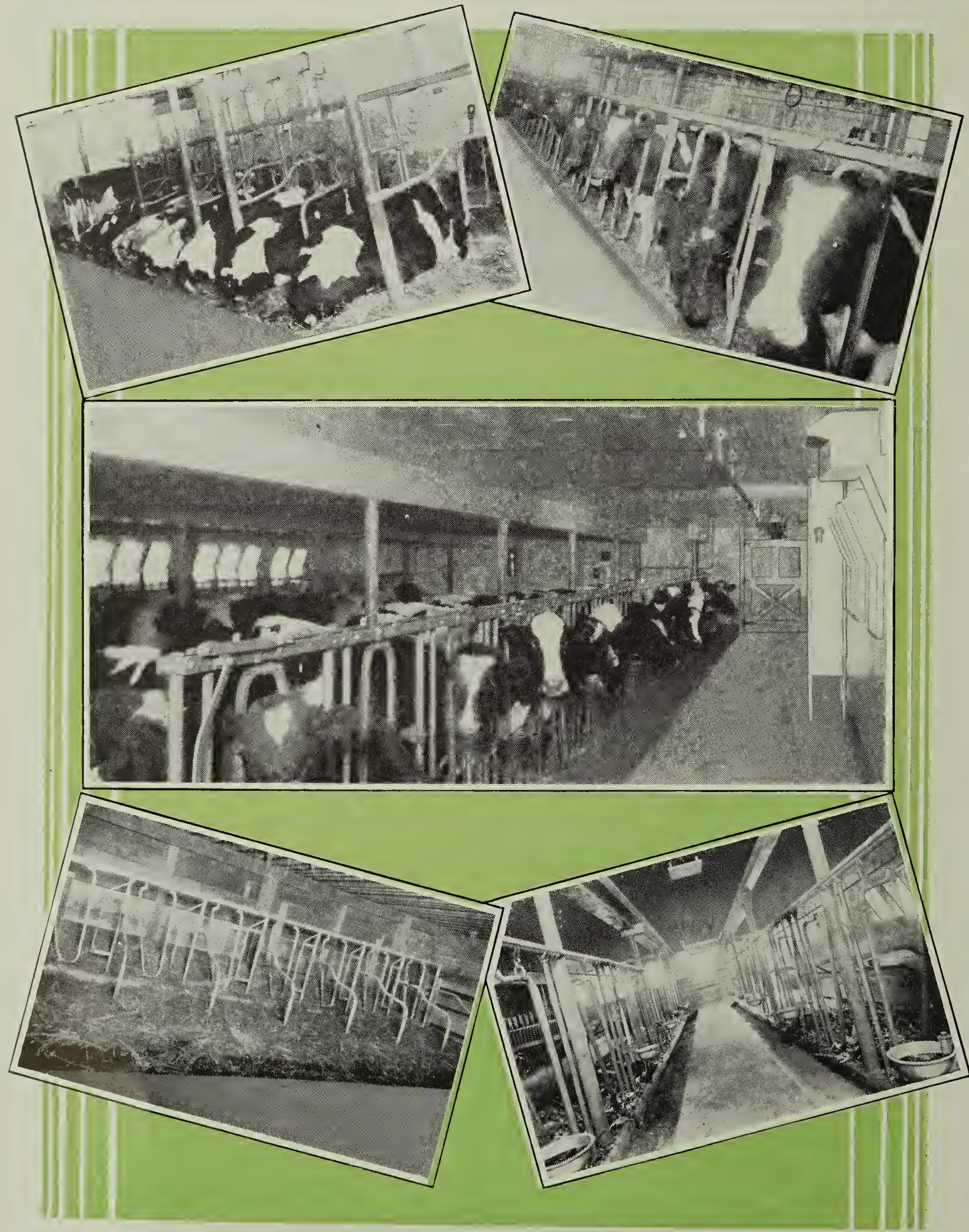
CLAY LEVER STALLS

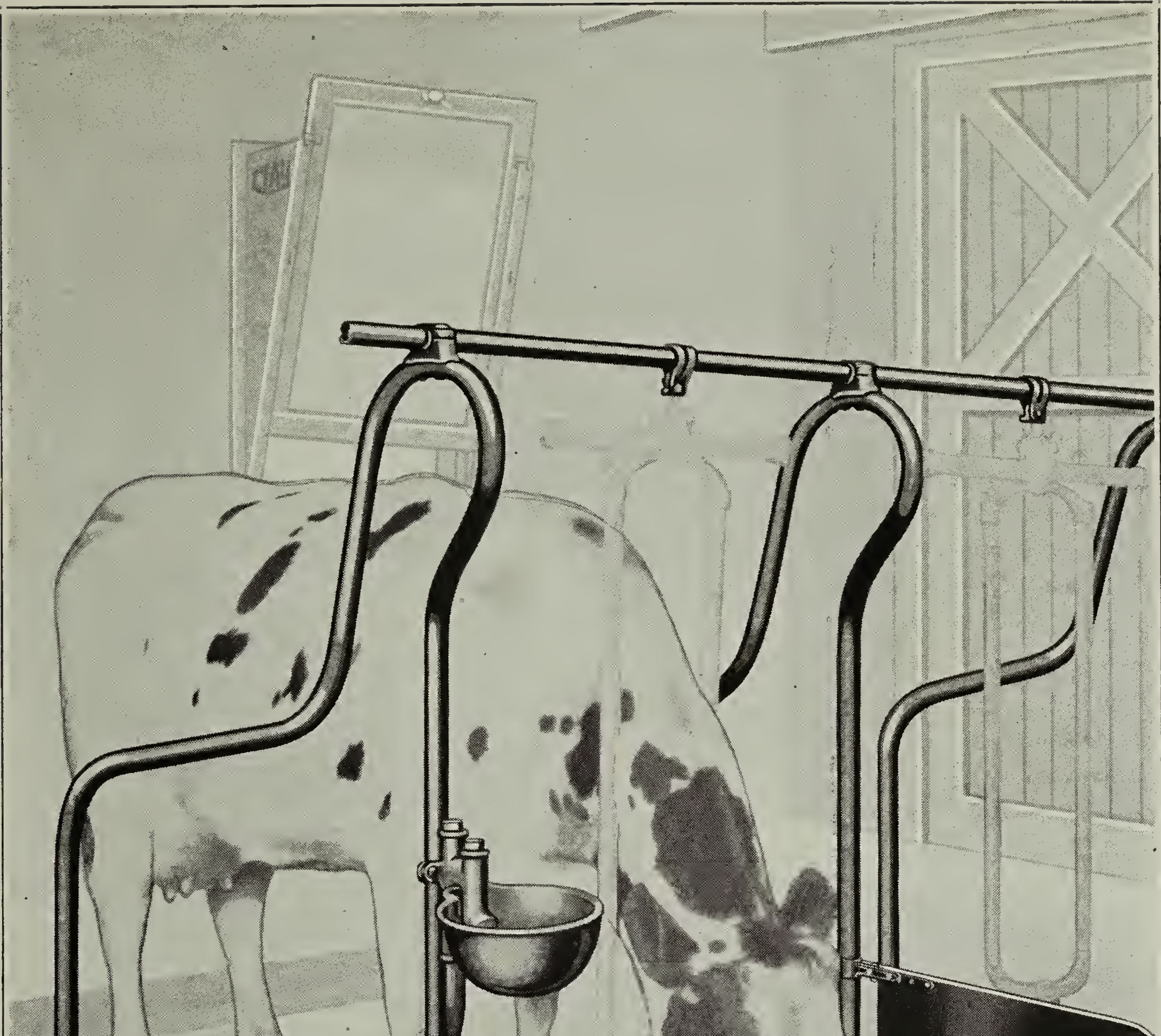


SPECIFICATIONS

PIPE FRAME: 1⅝″ O. D. Full Wt. Pipe, 2.2 lbs. per ft.
U-BAR STANCHION: 1¼″ x 1¼″ x $\frac{3}{16}$″ stiff Steel.
CASTINGS: Malleable Iron and Cast Steel.
LEVER SURE STOP: 1$\frac{1}{16}$″ O. D. Pipe, Arms Malleable.
SURE STOP OPERATING ARM: ¼″ x ¾″ Steel.
TOP RAIL: Two Pcs. 1″ x 1⅞″ x $\frac{3}{16}$″ Round Edge Channel, High Carbon, 3½ lbs per ft.
NECK WIDTH: Adj. to 6, 7 and 8″, less with liners.
NECK HEIGHT OF STANCHION: 45 inches.
OVERALL HEIGHT: (Above 6″ Curb) 54 inches.
FINISH: *Galvanized or Grey Baked Enamel.*
STALL WIDTH: Built to Size Specified on Order.
LEVER LOCATION: Either End, or Stall Next to End.
(SKETCH; location of lever, length of row, width of stalls.)
FITTINGS: Col. Clamps, End Clamps or Flanges Free.

Some Lever Stall Installations

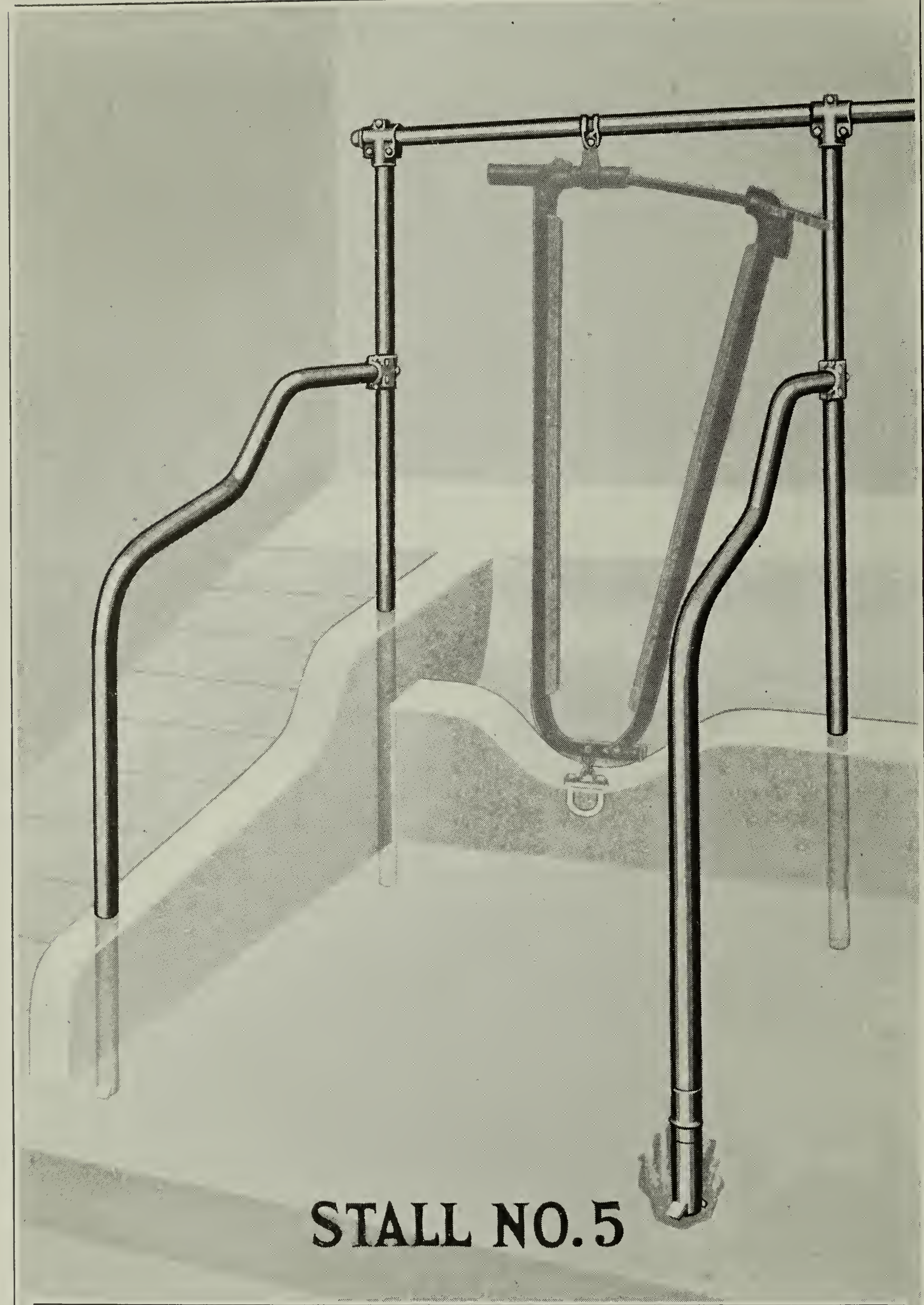




STALL NO.1

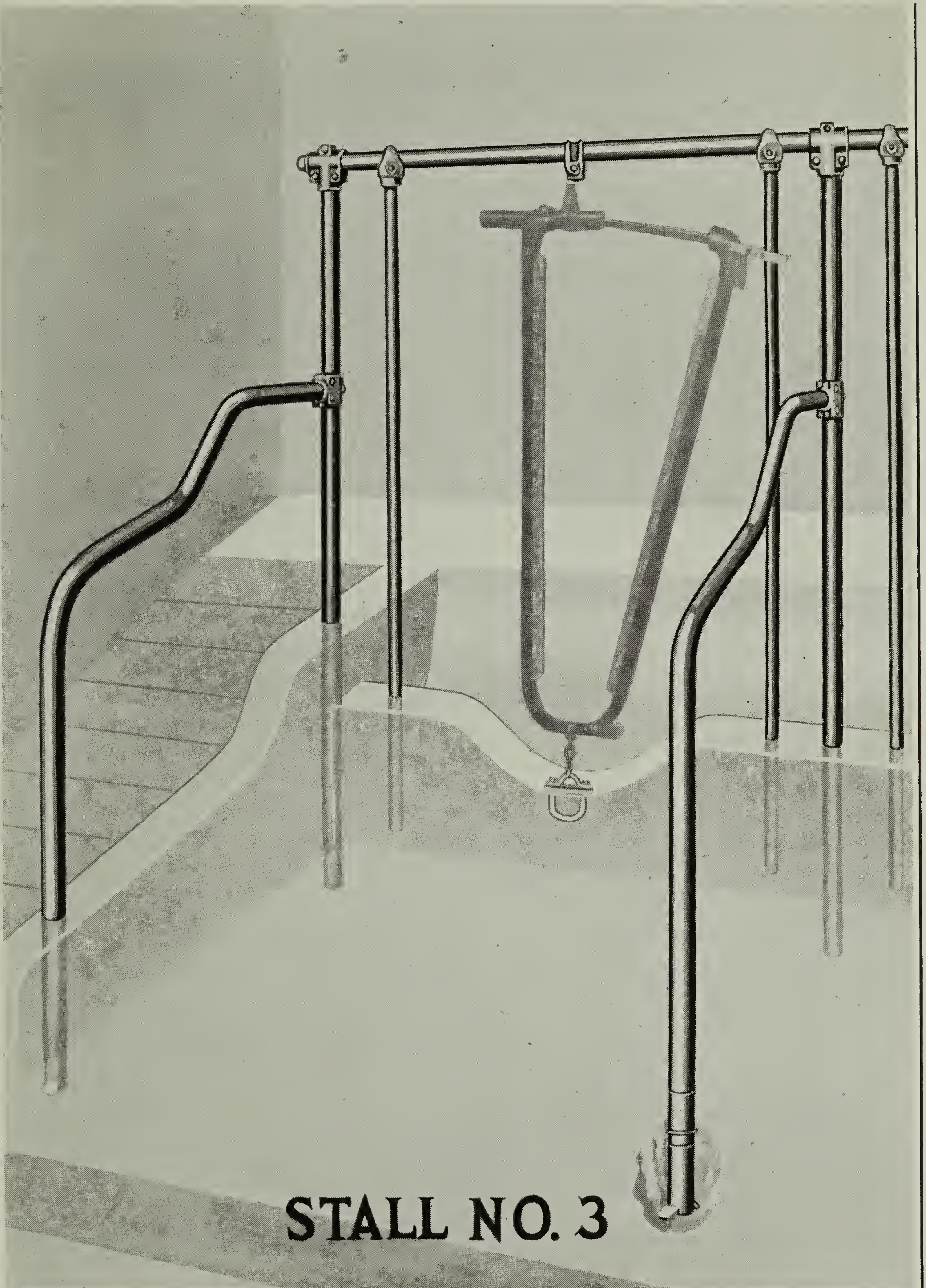
No. 1 — Stall frame with top rail and plain hanger and anchor (stanchions see pages 76-83) wt. 43 lbs. Specify width when ordering.
No. 1ES — Extra end of row section. Weight, 33 lbs.
DB138 — Detachable water bowl (see page 91). Weight, 13 lbs.
M115A — Hinged manger divisions (see page 88). Weight, 12 lbs.

Specify Galvanized or Baked Enamel



No. 5 — Stall frame with top rail and plain hanger and anchor (Stanchions see pages 76-83). Specify width, weight, 40 lbs.
No. 5ES — Extra end of row section. Weight, 30 lbs.

Specify Galvanized or Baked Enamel

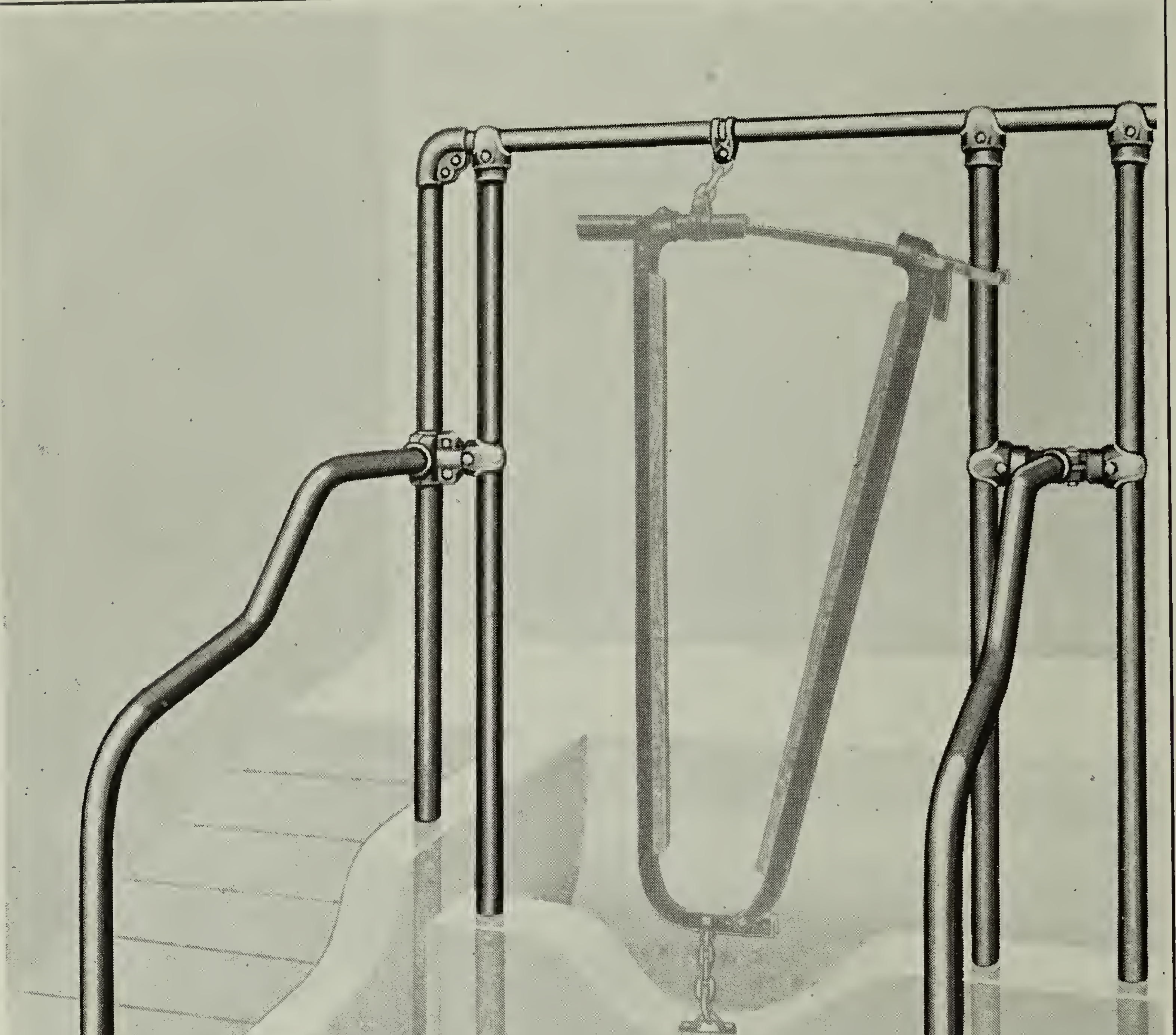


STALL NO. 3

No.3 — Stall frame with top rail and plain hanger and anchor (Stanchions see pages 76-83). Specify width, weight, 58 lbs.

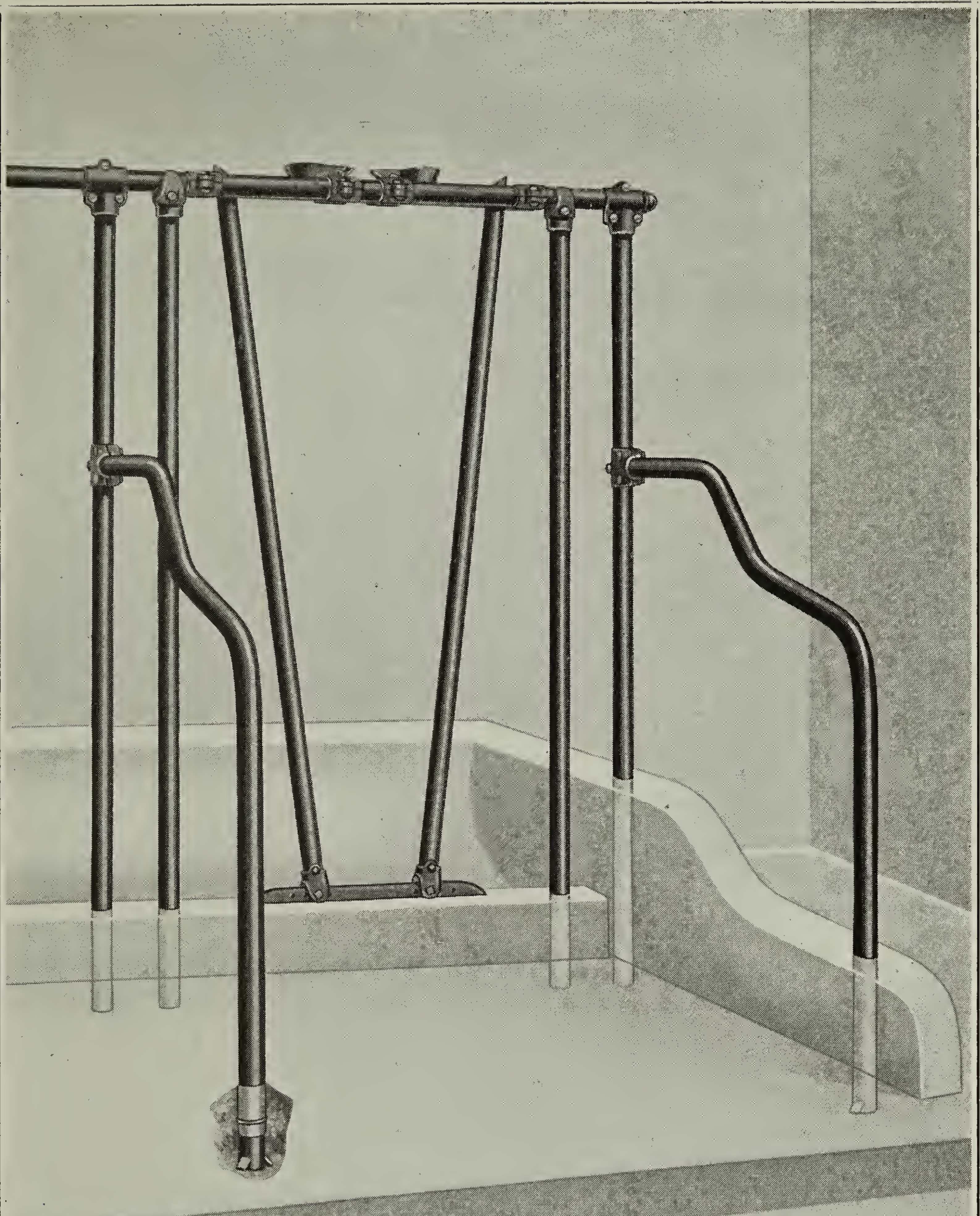
No. 3ES — Extra end of row section. Weight, 29 lbs. This stall is only advised for sizes 3′ 10″ and wider.

Specify Galvanized or Baked Enamel



No. 4 — Stall frame with top rail and plain hanger and anchor (Stanchions see pages 76-83). Specify width. Weight, 58 lbs.
No. 4ES — Extra end of row section. Weight, 29 lbs.
This stall is only advised for sizes 3′ 10″ and wider.

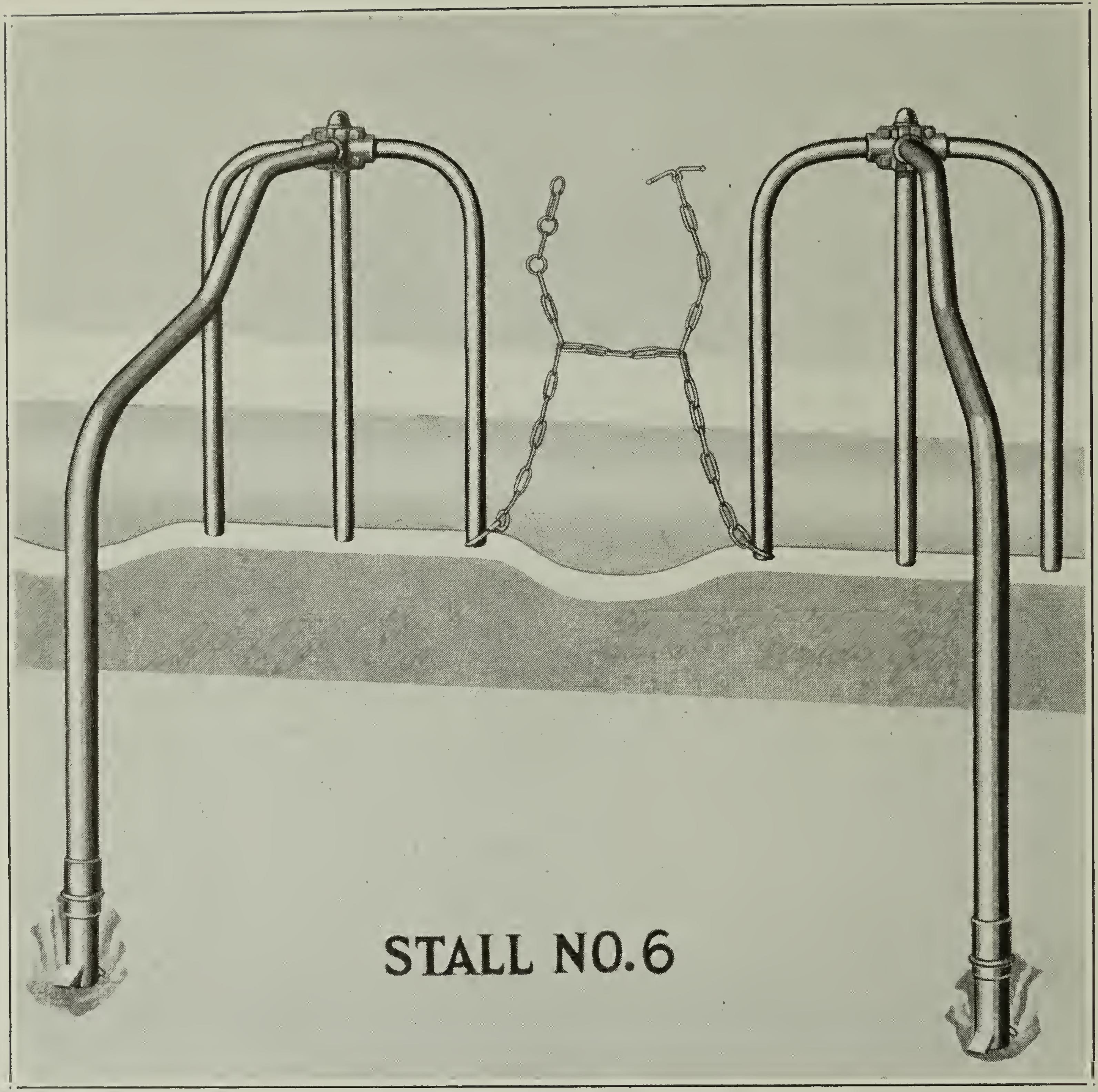
Specify Galvanized or Baked Enamel



BULL STALL NO.110

B110 — Stall frame and rigid 2-way stanchion. Includes extra rigid posts, very heavy anchor and double pipe top rail. Weight, 110 lbs.
No. 4ES — Extra end of row section. Weight, 29 lbs.

Specify Galvanized or Baked Enamel



Clay Arch Stall

This type of stall is generally selected by breeders of pure bred dairy cows desiring to show their animals to buyers. The stall frame being low shows up the cows perfectly.

The arch stall is very comfortable allowing great freedom to the animals. However, more care must be given to keep the stall platform clean. The CLAY arch stall is of exceptionally strong construction. Tight gripping dust-proof malleable castings fasten the partition and center post to the arch frame.

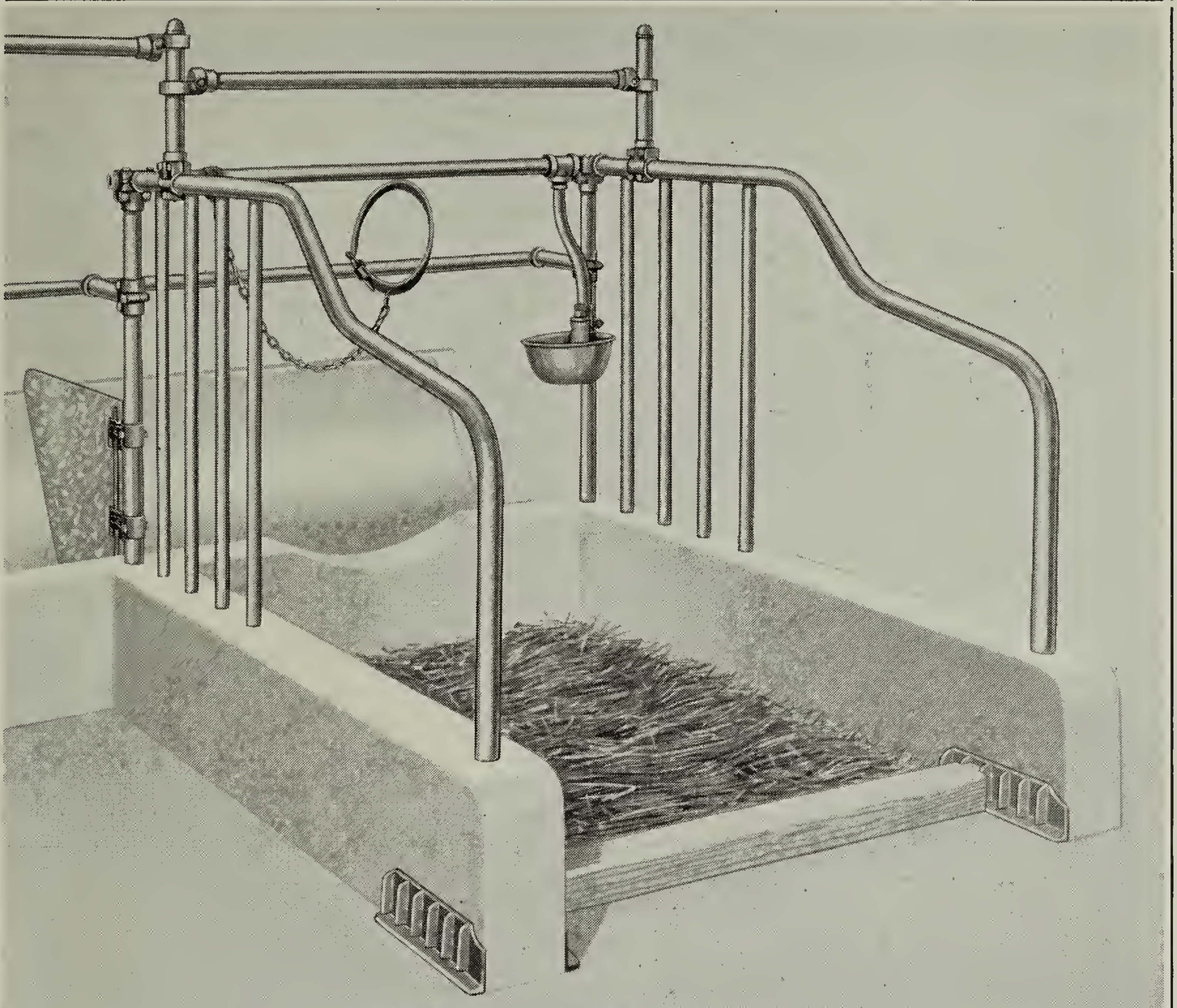
The center post adds ruggedness to the stall, also provides means to fasten manger division and drinking cups. Easily and quickly erected.

No. 6 — Stall complete as illustrated including chain tie. Weight, 50 lbs.

No. 6A — Same stall complete except without center posts. Weight, 40 lbs.

No. 6ES — Extra end of row section. Weight, 24 lbs.

Specify Galvanized or Baked Enamel



STALL NO. 9

Hoard Sanitary Stall

The Hoard sanitary stall, while quite different from the ordinary types has certain distinct advantages. First of all the width is usually four to five feet six inches giving ample stall comfort. Also the neck strap permits of greater freedom of movement almost equal to the box stall. The unusual departure from the conventional stall is head bars which permit of ready access to the feed manger but require the animal to back up several feet before she can entirely raise her head. As a cow will naturally raise her head before evacuating she quickly learns to step back over the adjustable 4 x 4 at the rear of the platform and thus the manure is deposited in the gutter well to the rear. As the animal lies down she will of course move forward to the bedding in front of this 4 x 4. A clean udder and clean flanks are a natural consequence.

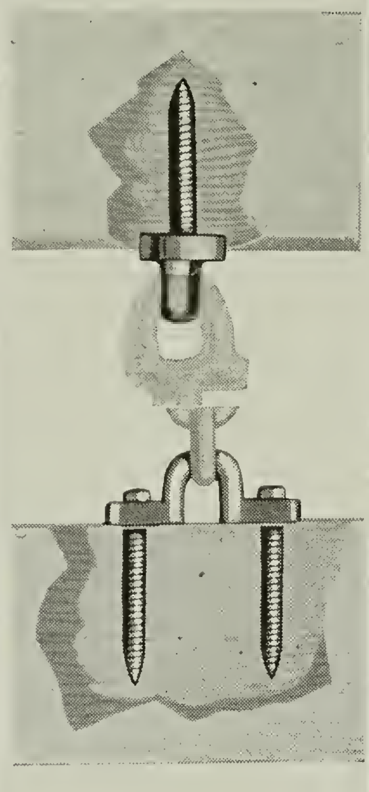
SPECIFICATIONS

Posts, lateral tubes and partition 1⅝″ O. D., welded seam pipe 2.2 lbs. per foot. Spindles $1\frac{1}{16}$″ O. D., welded seam pipe 1⅛ lbs. per foot. Width — we advise 4 ft. to 4 ft. 6 in. Partitions — 3′ 6″ from curb to top. Curb 6″ wide, 7″ high. 5′ 9″ center of curb to center of rear leg. Water bowls — See full details pages 91 to 95.

No. 9 — Hoard Sanitary Stall. Weight, 90 lbs.

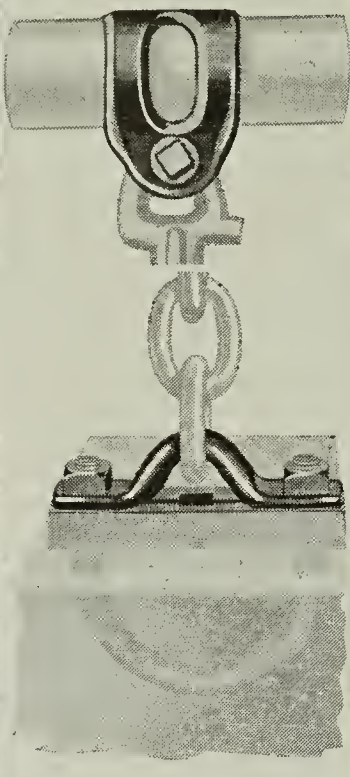
MD115B — Special type manger division that raises and turns, made from 12 gauge galvanized steel 16 inches high, 24 inches wide. Weight, 16 lbs.

HANGERS and ANCHORS



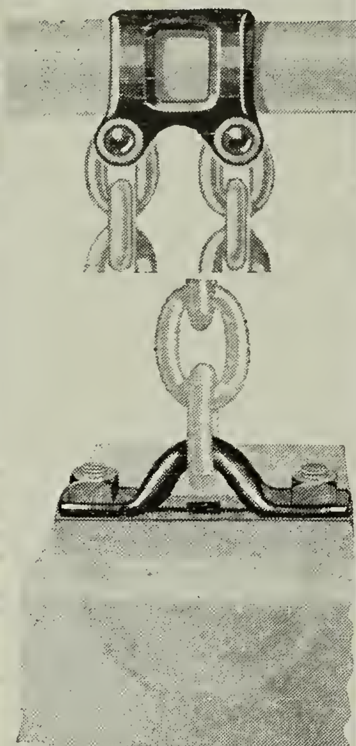
Hanger and Anchor Wood Stalls.

HA101 .. ¾ lb.



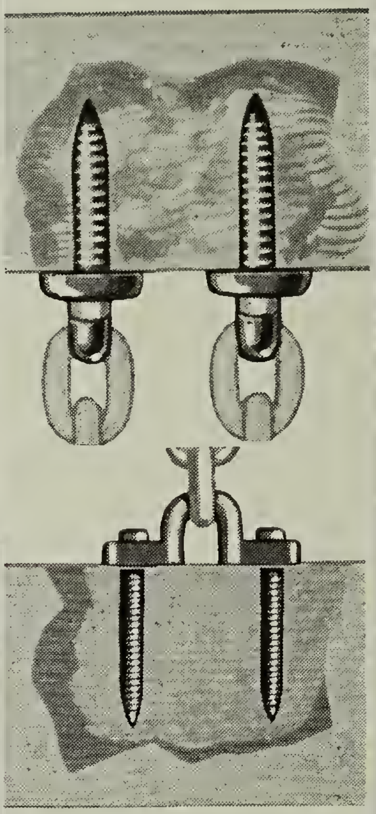
Hanger and Anchor 1⅝ inch pipe rail and cement curb.

HA102 .. 1½ lbs.



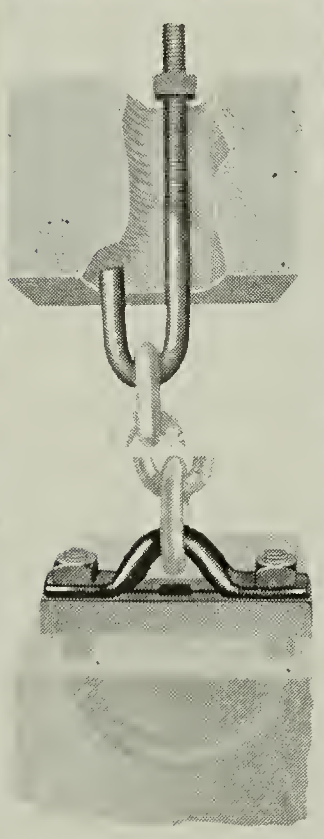
Hanger and Anchor Bull stanchion B106 for 1⅝ inch pipe rail and cement curb.

HA104 .. 1½ lbs.



Hanger and Anchor Bull stanchion B106 for Wood Stalls.

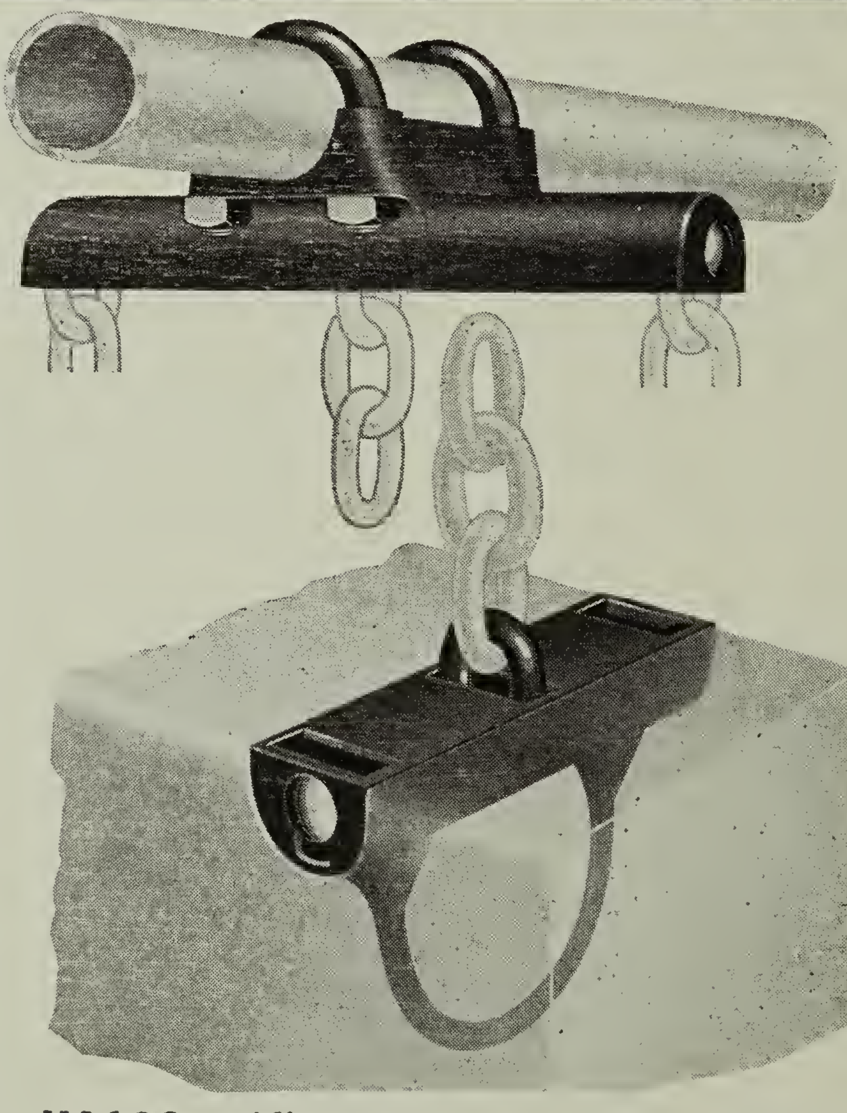
HA105 .... 1 lb.



Hanger and Anchor for wood top rail and cement curb. HA107, J-Bolt and anchor 1⅓ pounds.

HA107 .. 1⅓ lbs.

Alignment hanger provides for backward and forward adjustment of 9 in. Quickly adjusted by removing one long bolt, replacing same when the chain is moved. Five points of adjustment, each 2¼″. Hanger absolutely can not turn or rock on top rail. Only wear is on bolt which is cheaply replaced. Anchor permits 5″ adjustment overall, each adjustment 2½″. Only wear is on a bolt.



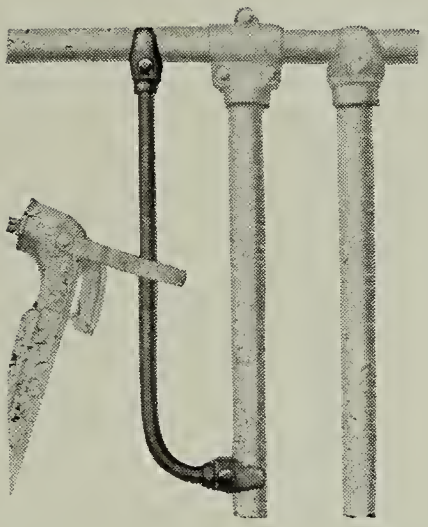
HA106 — Alignment .... 5½ lbs.

The anchor is supplied with a cold shut link which when engaged with chain at bottom of stanchion provides increased length to fit into the anchor.

HA106 — Alignment hanger and anchor, weight 5½ pounds.

All hangers and anchors supplied with enamel or galvanized finish.

SURE STOPS



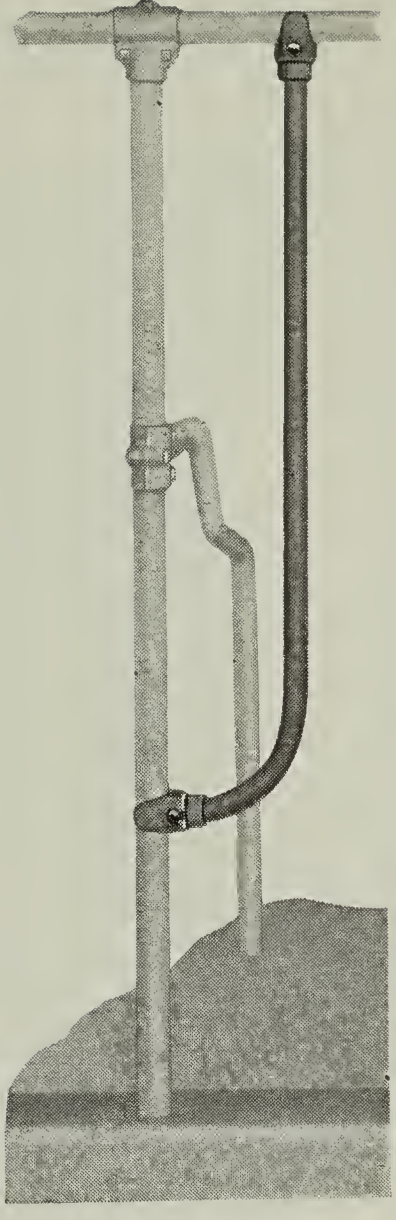
Hold Open Stop For Wide Stalls (Left)

For stalls spaced wider than 3′ 6″ we offer the CLAY stanchion hold open guide. It holds stanchion in line with stall row so cows can enter wide opening of stanchion when returning to their stalls. Not required with stanchions S105, CD90 and HE-108 which three have a cam swivel hanger that holds stanchions in line without a hold open clip.

Made of 7/8″ solid steel.

Grey enamel or galvanized finish.

No. HOS1 — Weight 2¼ lbs.



Rigid Sure Stop (Right)

The CLAY formed bottom sure stop shown here offers several advantages. First, like all sure stops, it closes the wide space on the non-opening side of the stanchion. We advise its use on stalls 3′ 9″ and wider.

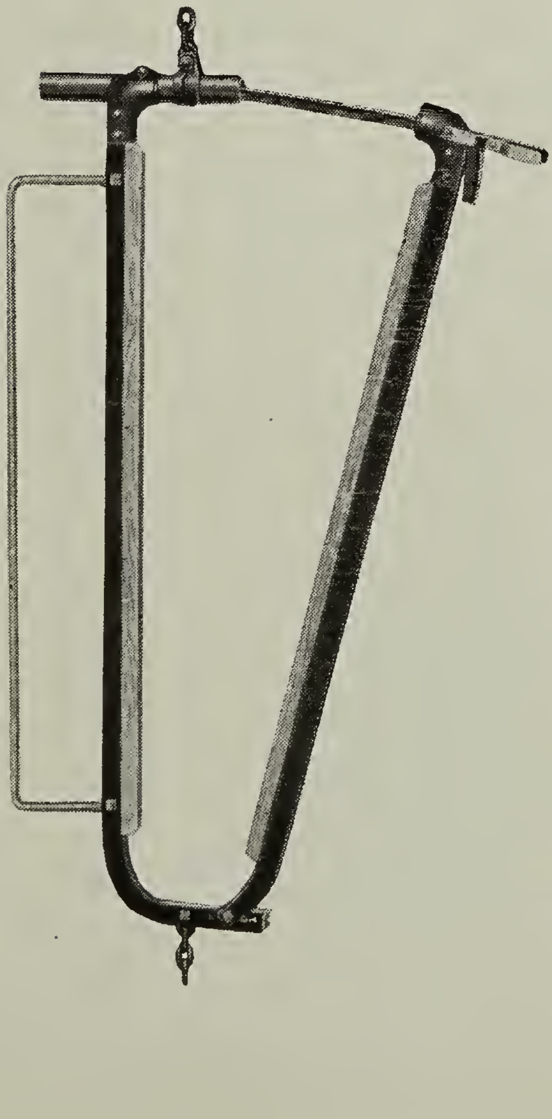
Second, this style of sure stop can be installed any time after the equipment is in use.

Third, cows lying down can turn their heads freely below the bent bottom.

Made of 1/16″ O. D. steel tubing — complete with fittings.

No. SS1 — Weight, 4¾ pounds.

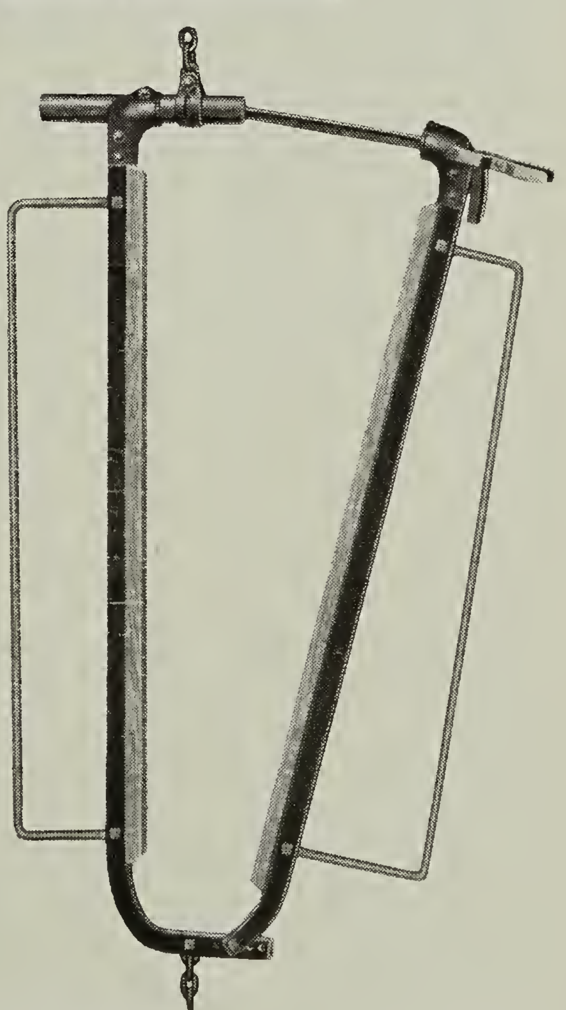
Sure Stops on Stanchions



CLAY sure stops attached to stanchions, although inexpensive are very effective.

These are furnished to fit all CLAY stanchions. They are simply bolted to the side bars at top and bottom.

These sure stops when used on CLAY two-way and CLAY BELL stanchions must be ordered and put on at factory. All other CLAY stanchions are drilled to accommodate these stops.



SS2 — Fits stationary side of stanchions HE108, CD-90, CD91, CB109. Weight, 2 pounds.

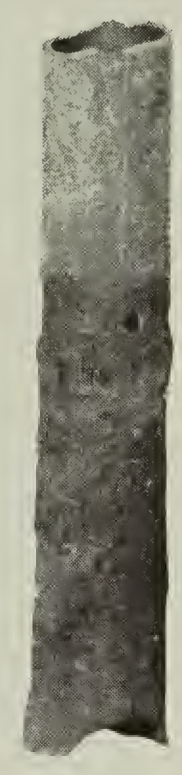
SS2A — Fits movable side of stanchions HE108.

SS2B — Fits movable side of stanchions CD90, CD91 and CB109. Weight, 2 pounds.

SS3 — Fits either side of S105 two-way stanchion. Weight, 2 pounds.

Protection Against Rust

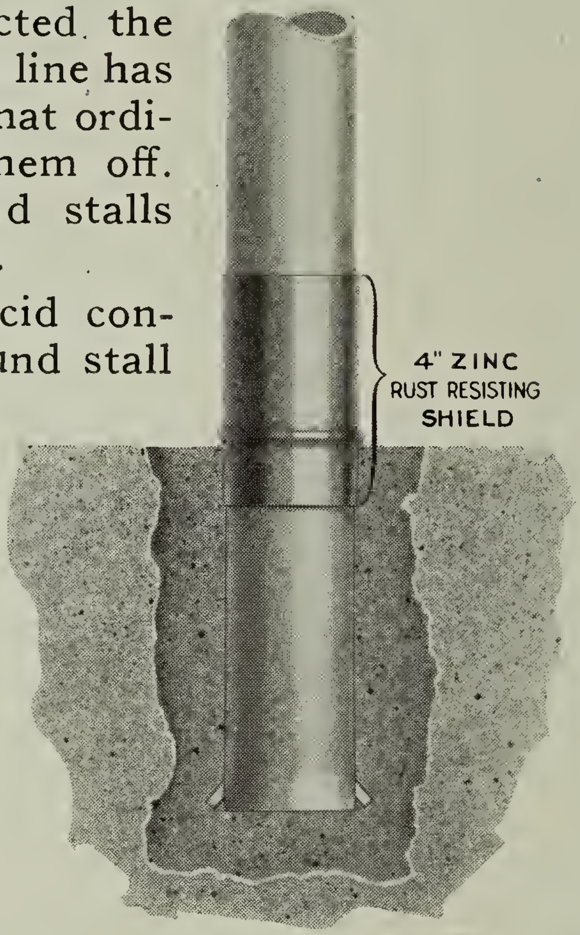
No Extra Charge



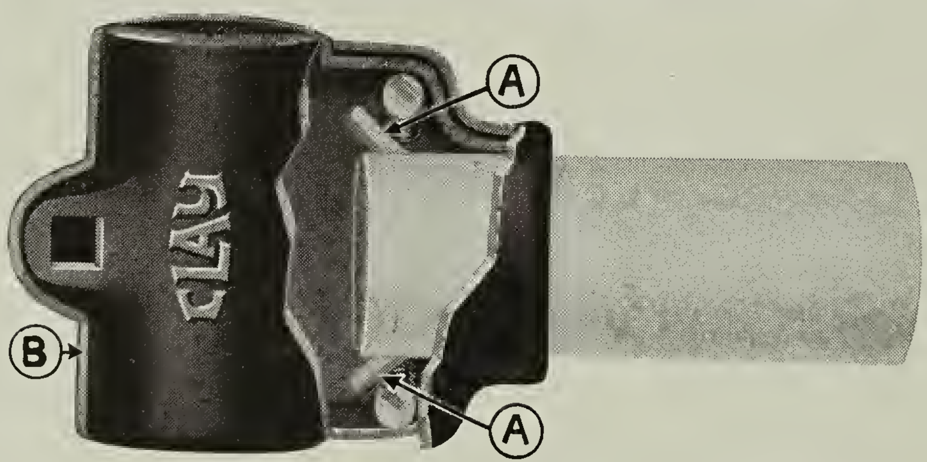
Anyone who has ever inspected the rear legs of stalls at the cement line has seen the steel so badly rusted that ordinary pressure would break them off. That is true of unprotected stalls though in use only a few years.

The ammonia fumes and acid contained in manure settling around stall legs actually eat holes clear through as shown in unretouched photo at left.

CLAY partition legs, illustrated at the right, are provided with zinc shield 4″ long, at no extra charge. This stops rusting and weakening of pipe at the floor line.



Interlocking Clamp



An Exclusive Feature

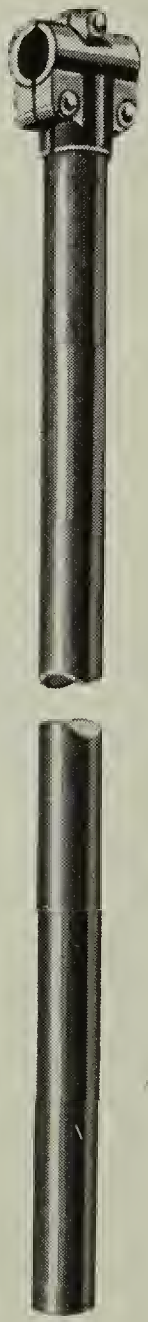
The illustration shows a patented means of locking by lugs (A) on the end of pipe inside the casting clamps. Also all clamp castings have overlapping flange (B) where two parts meet to make them practically dust proof.

SINGLE POST

Often used in very narrow stalls where every other partition is left out.

5′ 6″ long made of 1⅝″ steel pipe complete with tight-fitting, dust-proof malleable clamp.

D113 — 13½ pounds.

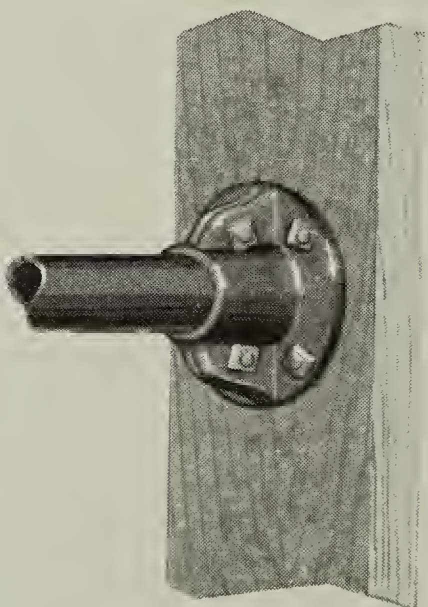


WALL FLANGE

This flange is used to connect stall rail or pen rails to wood or masonry walls.

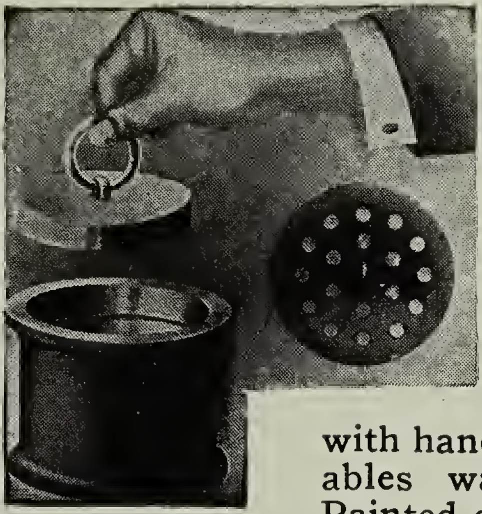
Fits Pipe

CE18 — 1⅝″— 1¾ pounds.
CE26 — 1 9/10″— 2½ pounds.



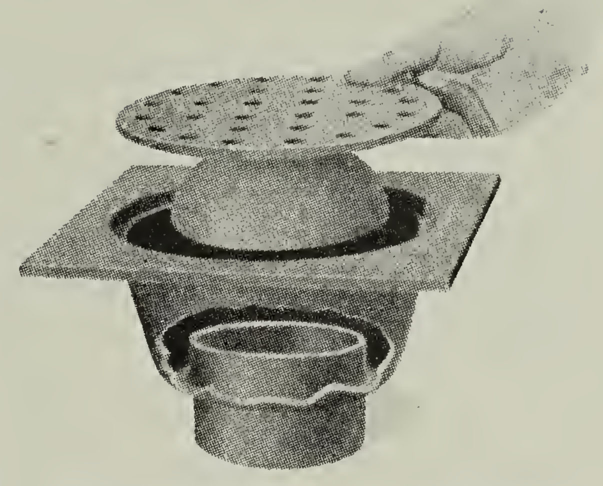
Items on this page supplied Enamel or Galvanized.

Manger and Gutter Drains

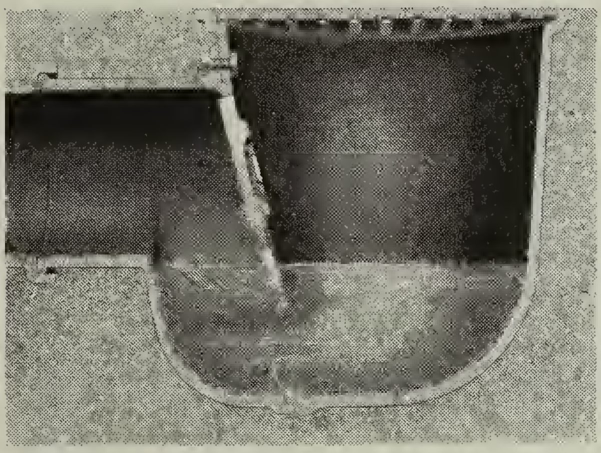


Used in cement mangers. Thorough cleaning of manger and flushing with water is possible when CLAY drain is used. Screen cap of heavy construction is provided to keep solids from clogging outlet. Drain quickly taken apart. Aluminum cap with hand ring fits drain snugly; enables watering cows in manger. Painted only.

Four inches in diameter. Fits 1½″ or 2″ pipe.
MD637 — Manger Drain, weight, 6 pounds.



Cast iron—designed to be easily taken apart if necessary. Top of drain is set flush with floor or bottom of gutter. Plate measures 9″ square, fits 4″ tile or pipe. Painted only.
GD1070 — Gutter drain. Wt. 12 pounds. Painted only.



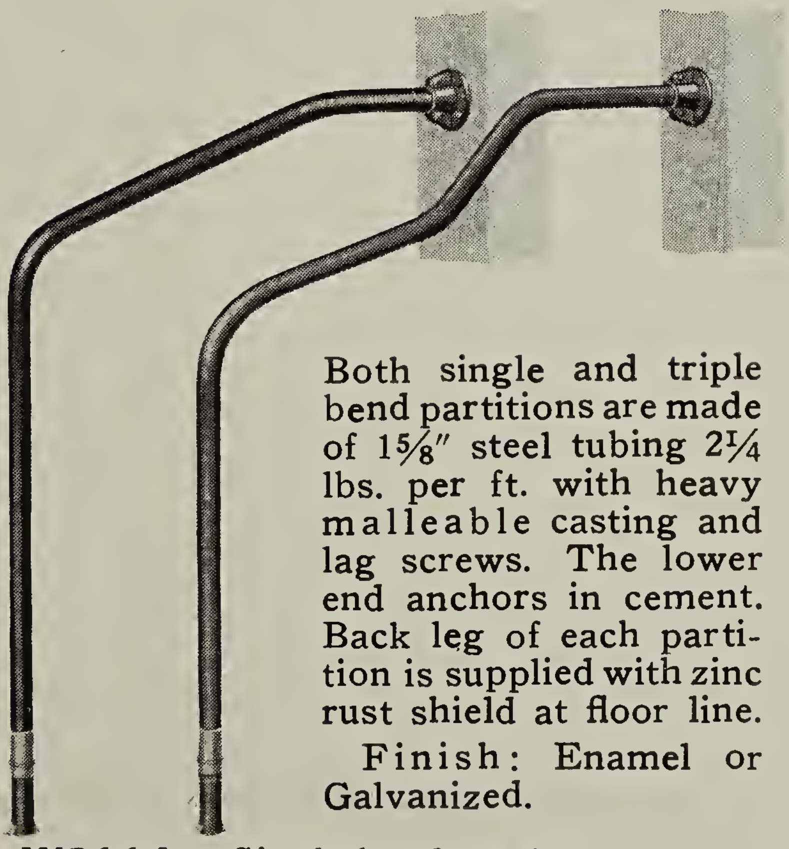
Large Gutter Drain

Top 8″ dia., bowl 9″ deep. Two covers, one strainer, one solid. Fits 4″ cast or sewer pipe. Large bowl, hence seldom clogs. Nevertheless a brass clean out plug is provided — by removing plug a stick can be pushed into sewer dislodging sediment.

Note plate submerged in water. Prevents sewer fumes returning into the stable.

GD1071 — Gutter Drain. Weight, 25 lbs. Painted only.

Partitions for Wood Stalls



Both single and triple bend partitions are made of 1⅝″ steel tubing 2¼ lbs. per ft. with heavy malleable casting and lag screws. The lower end anchors in cement. Back leg of each partition is supplied with zinc rust shield at floor line.

Finish: Enamel or Galvanized.

WS114 — Single bend, 15 lbs.
WS114A — Triple bend, 15 lbs.

Chain Alley Gate

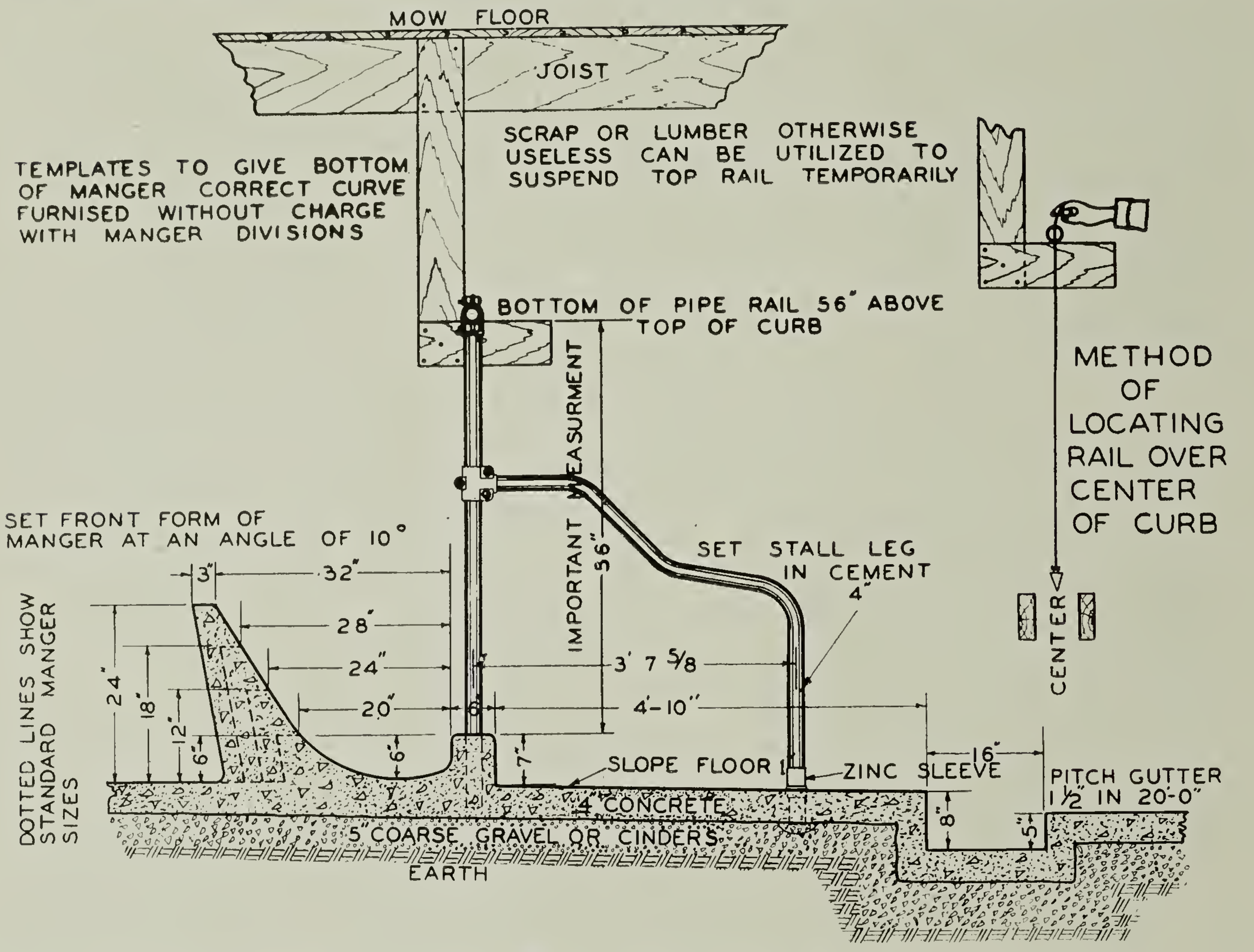
Any width up to 6 ft. Additional width 60c per foot.

Advise size of posts or kind of wall to attach ends of 6 chains.

No. 739 — Chain Alley Gate. Add for extra length.

Finish: Enamel or galvanized. Pressed steel and welded, open both sides. Fits 1⅝″ pipe rail, two sheets celluloid, opening 3½″x10½″.
NP1 — Weight, 1.1 pounds.

Clay Equipment Is Easily Installed



TEMPLATES TO GIVE BOTTOM OF MANGER CORRECT CURVE FURNISED WITHOUT CHARGE WITH MANGER DIVISIONS

SCRAP OR LUMBER OTHERWISE USELESS CAN BE UTILIZED TO SUSPEND TOP RAIL TEMPORARILY

METHOD OF LOCATING RAIL OVER CENTER OF CURB

SET FRONT FORM OF MANGER AT AN ANGLE OF 10°

DOTTED LINES SHOW STANDARD MANGER SIZES

PITCH GUTTER 1½" IN 20'-0"

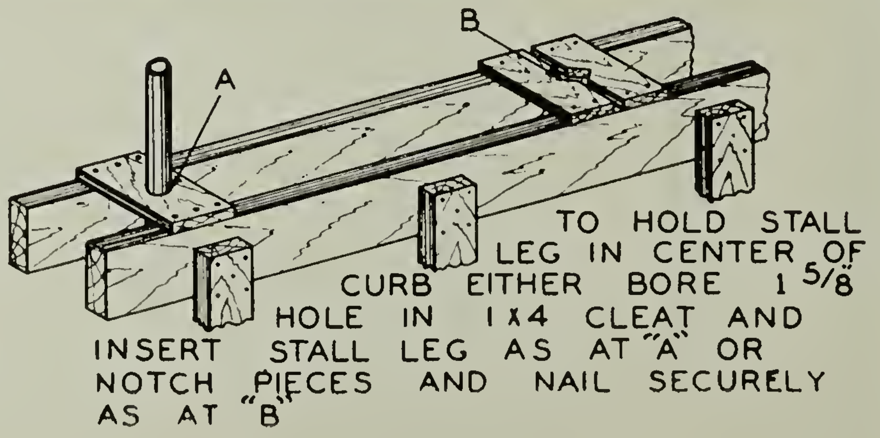
First established lever of stall floor; then build the curb form with top 7" above stall floor. However, curb height is optional. To erect CLAY stalls, work from the ceiling down. Place stanchion hangers on stall rails; locating center of hanger at what will be center of stall, before erecting the rail. Temporarily support top rail from ceiling so the bottom of the rail is suspended 56" above the curb where stanchion anchor will be placed. (See illustration above. Use a bob line as shown to locate rail over center of curb.)

Clamp stall upright posts to rail, spacing the posts the desired width for stall. Next plumb the stall partitions and hold legs firmly in place by methods showed in diagram below.

Pour the cement into curb form, and place stanchion anchor castings, pressing them into the cement exactly in center of each stall, being sure that the cement anchor runs the long way with the curb — thus hanging in line with the bottom chain of stanchion. If alignment anchors are used (HA106) anchor is to run cross-wise in curb.

After curb sets, build forms for gutter and pour stall platform and litter alley. Manger can be made at the same time.

Ask for blue print instructions for installing CLAY lever stalls.



TO HOLD STALL LEG IN CENTER OF CURB EITHER BORE 1 5/8" HOLE IN 1 X 4 CLEAT AND INSERT STALL LEG AS AT "A" OR NOTCH PIECES AND NAIL SECURELY AS AT "B"

HAND TO MOUTH
OR
MONEY TO POCKETBOOK

FARMING *as a means of livelihood and farming as a profitable business are two distinct propositions. Farming to merely make a living is at the best, only a hand to mouth existance — farming as a business is a hand to pocketbook proposition. In the first case everything is consumed as fast as it is produced, while in the latter case a liberal part is generally left for the pocketbook.*

For years the average farmer was content to gain from his acres, food and lodging. Today it is different — men go into farming as a business in which they can make not only a living for themselves and family, but a distinct net profit besides.

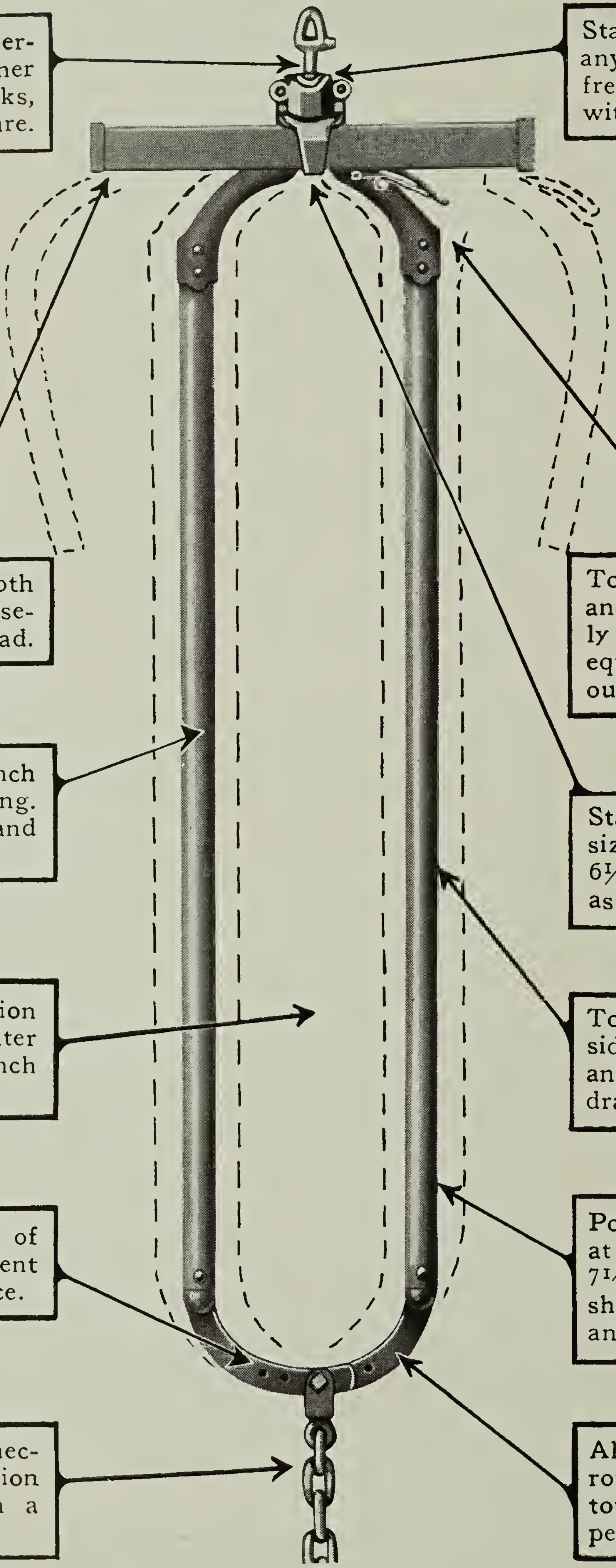
Today men consider farming as an opportunity — as the best and biggest business in the world.

Probably in no type of husbandry has the need for drastic changes in method of production been so necessary as in dairy farming. Old style methods that formerly enabled a farmer to get by are no longer adequate. Times have indeed changed — many an old dairy barn, from which a fair living could be squeezed in the old and unhurried days of thirty years ago, is today robbing its owner instead of making a profit.

These are times of keen competition, only those who produce economically survive. Hair pins were once formed by hand, today it requires a thousand dollar machine if the manufacturer is to make a profit in the face of stiff competition. Failure has its hand on the shoulder of men who ignore this trend of the times.

Once a farmer has embarked on the labor saving, money making method through modern steel equipment, he will never go back to the old way for twice the cost of the new. It is only after you own and operate labor saving CLAY *equipment that you can appreciate how really worth while it is.*

Clay 2-Way Stanchion



Swivel suspension permits cow to turn her head or lick her flanks, just as in the pasture.

Stanchion will turn in any direction and, when free, come back in line with Stall.

Open or closed, both side bars are always securely held in the head.

To open, grasp latch and side bar, pull slightly and bars slide open equally and simultaneously.

Side bar, 1 5/16-inch heavy steel tubing. Easy to keep clean and sanitary.

Stanchion will hold any size of cow. Latches at 6½, 7½ or 8¼ inches as desired.

When open, Stanchion hangs straight in center of Stall — full 21-inch opening.

To close, push either side bar toward center and opposite side is drawn to meet it.

Lower adjustment of Stanchion for different widths of neck space.

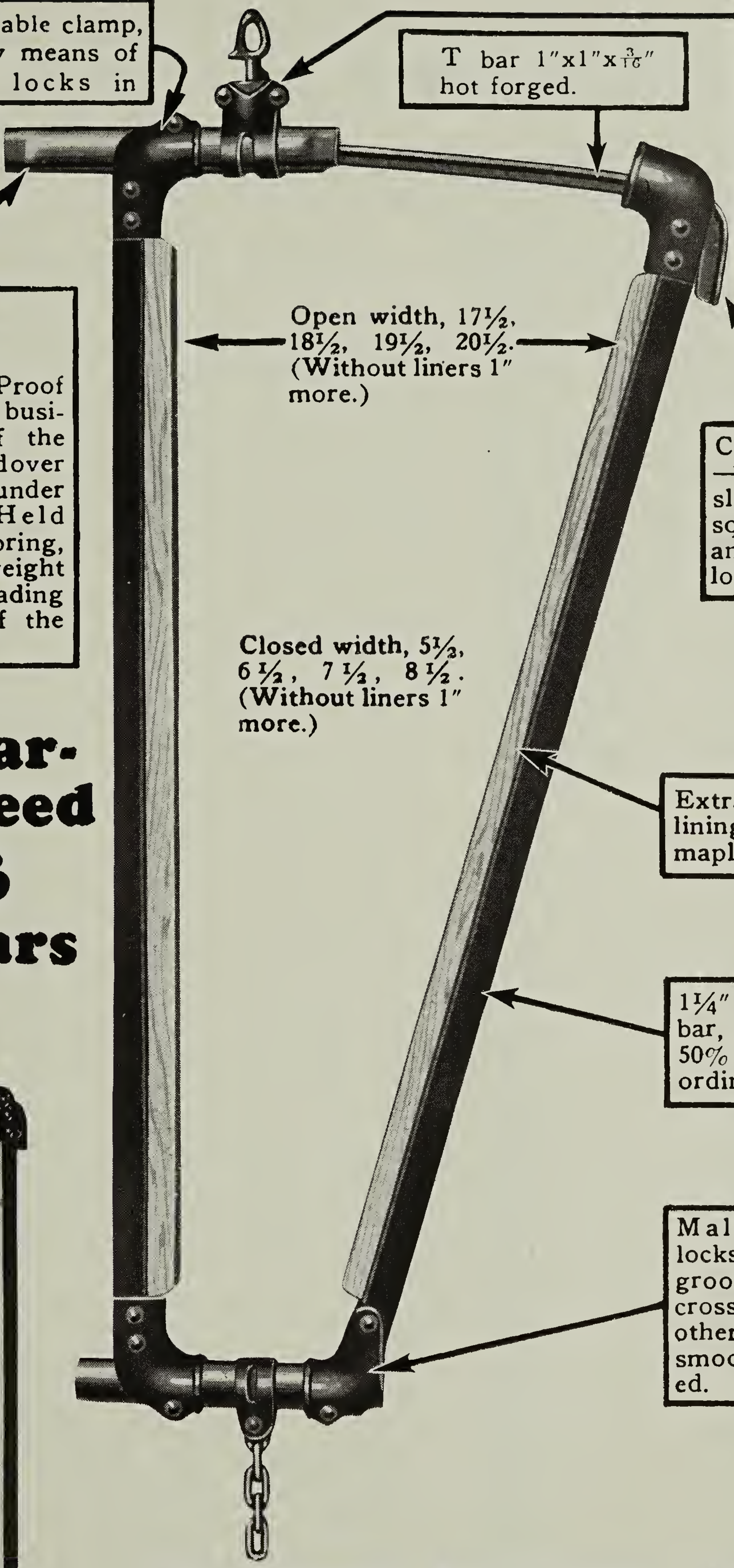
Position when latched at customary width—7½ inches. Dotted lines show position at 6½ and 8¼ inches.

Chain Swivel connection permits stanchion to swing freely in a radius of 5 inches.

All corners are nicely rounded. Every part touching cow's neck is perfectly smooth.

S105 — 2-Way Stanchion, plain, 18 pounds.
S105WL — 2-Way Stanchion, wood lined, 20 lbs.

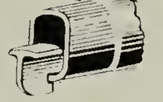
Finish: ***Enamel or Galvanized.***



Strong, malleable clamp, adjustable by means of bolt which locks in grooves in head pipe.

T bar 1"x1"x$\frac{3}{16}$" hot forged.

Swivel hanger—cast steel and malleable permits stanchion to swing freely either way but will always return to position in line with stall.



100% Cow Proof—Here is the business end of the latch. Hooked over the end and under the end. Held there by a spring, by its own weight and by spreading pressure of the cow's neck.

Open width, 17½, 18½, 19½, 20½. (Without liners 1" more.)

Cow proof latch—it requires a slight push and a squeeze. Tricky animals can't unlock it.

Closed width, 5½, 6½, 7½, 8½. (Without liners 1" more.)

Guaranteed 3 Years

Extra heavy wood lining. Birch or maple and oiled.

1¼" x 1¼" x $\frac{3}{16}$" U bar, made of steel 50% stronger than ordinary kind.

Malleable hinge, locks by bolt into grooves in bottom cross pipe. This and other corners are smooth and rounded.

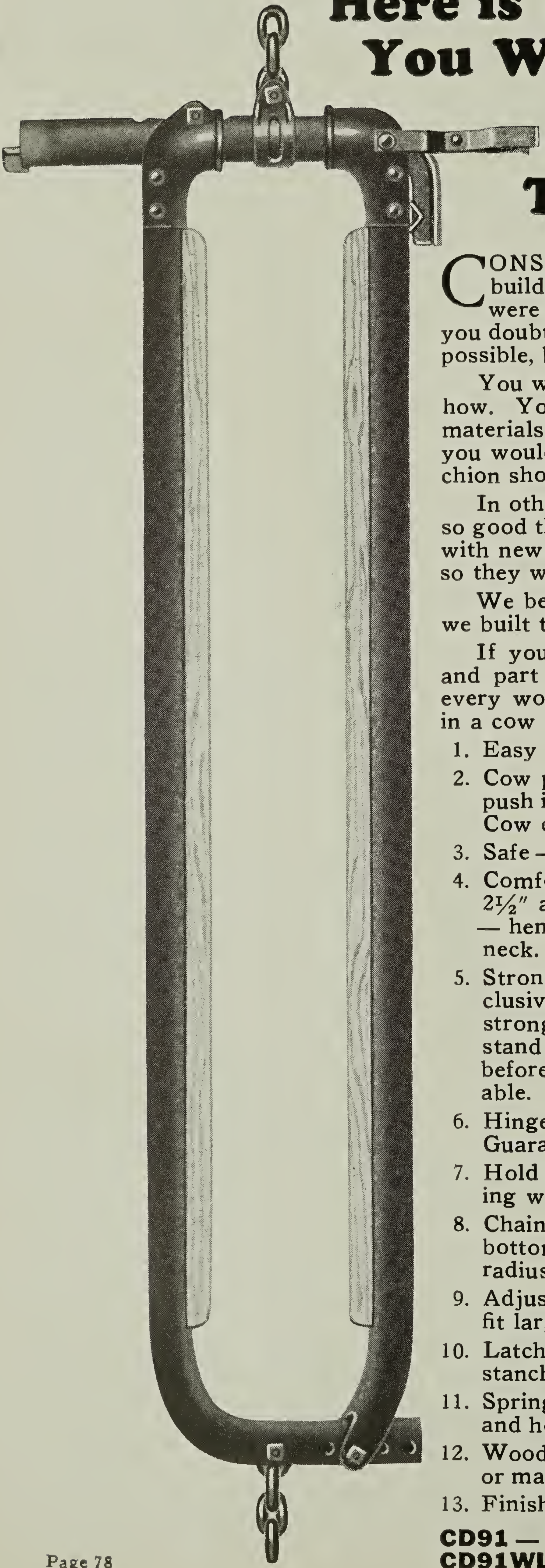
Clay Daisy Stanchion CD90

Finish: *Enamel or Galvanized.*

CD90 — Clay Daisy Stanchion, casting bottom, plain side bars, 23 pounds.

CD90WL — Clay Daisy Stanchion, casting bottom, wood lined, 25 pounds.

Here is the Stanchion You Want For Your Cows



The "DAISY"

CONSIDER, kind reader, were you yourself to build cow stanchions for your own use, and were it practical or even economical to do so, you doubtlessly would build them not as cheaply as possible, but as good as possible.

You would design them the very best you knew how. You would build them from the choicest materials you could obtain for the purpose intended, you would incorporate all the fine features a stanchion should have. Isn't that right?

In other words you would build your stanchions so good that you would never have to replace them with new ones. You would design and build them so they would give you efficient, lasting service.

We believe you would build your stanchions as we built the CLAY Daisy stanchion shown here.

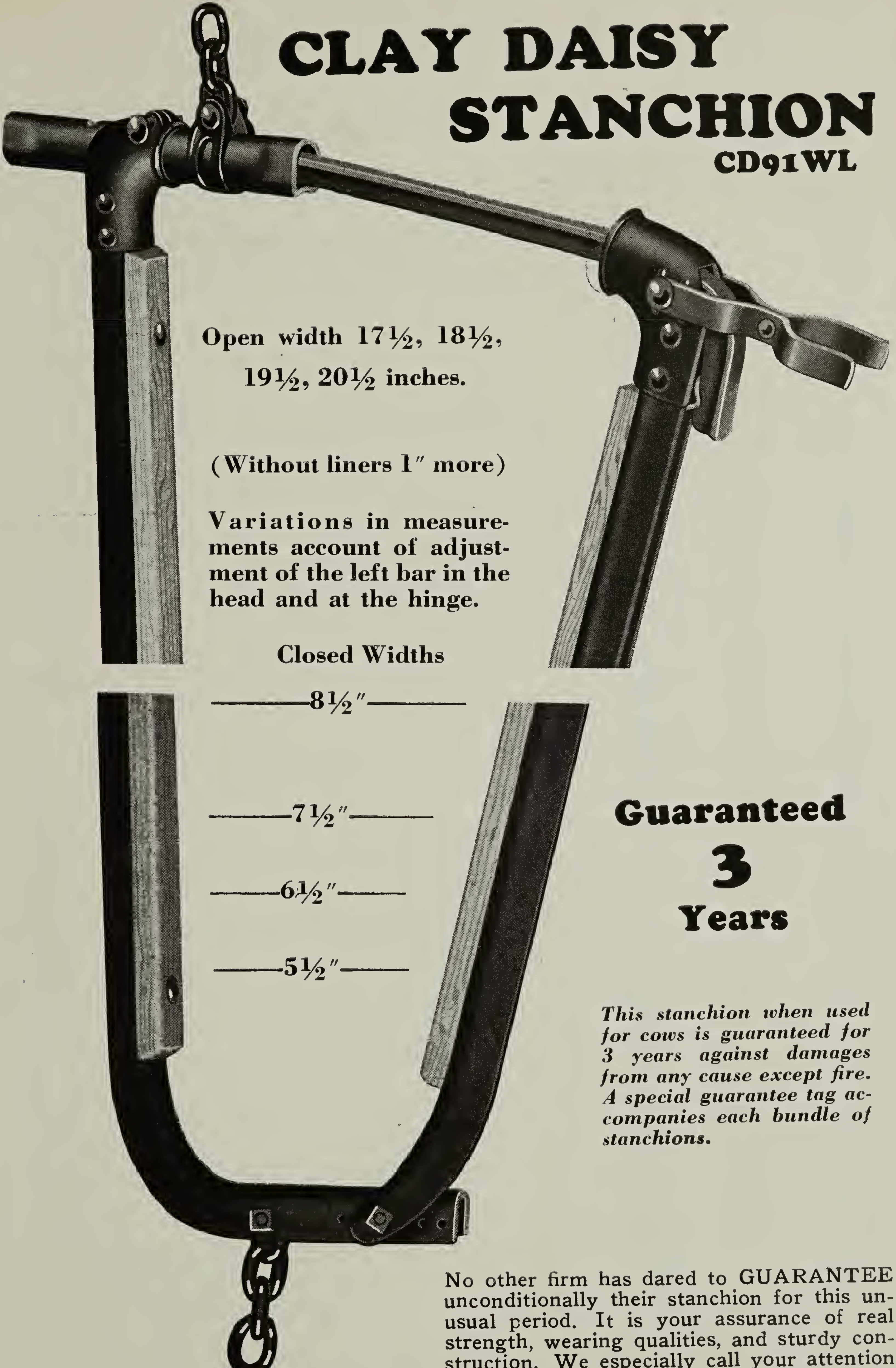
If you examine this stanchion piece by piece, and part by part, you will find that it embraces every worth while and practical feature desirable in a cow stanchion.

1. Easy to operate. Requires only one hand.
2. Cow proof latch — to open it requires a slight push inward and pressure on latch at same time. Cow can't unlock it.
3. Safe — no chance to cut fingers on sharp fittings.
4. Comfortable — neck height inside 45″, actually 2½″ and 3½″ higher than ordinary stanchions — hence it doesn't ride the top of a large cow's neck.
5. Strong — side bar special steel, U bar rolled exclusively for us. 1¼″x1¼″x$\frac{3}{16}$″. Larger and stronger than used in other stanchions. Will stand from 200 to 300 lbs. greater pressure before bending. Castings all high grade malleable.
6. Hinge — hot forged, smooth, rounded edges. Guaranteed not to break.
7. Hold Open Clip — keeps stanchion from swinging when open.
8. Chains — three heavy links at top — four at bottom — permitting stanchion to swing in radius of 5″.
9. Adjustable top and bottom — four widths, to fit large or small cows.
10. Latch — heavy T bar construction. Prevents stanchion side bar from falling away.
11. Spring — rust proof coil springs, giving tension and hold latch securely.
12. Wood lining — extra heavy wood lining, birch or maple and oiled. Rivets countersunk.
13. Finish: ***Enamel or galvanized.***

CD91 — Daisy — Plain. Weight, 20 lbs.
CD91WL — Daisy — Lined. Weight, 22¼ lbs.

CLAY DAISY STANCHION

CD91WL



Open width 17½, 18½, 19½, 20½ inches.

(Without liners 1″ more)

Variations in measurements account of adjustment of the left bar in the head and at the hinge.

Closed Widths

———8½″———

———7½″———

———6½″———

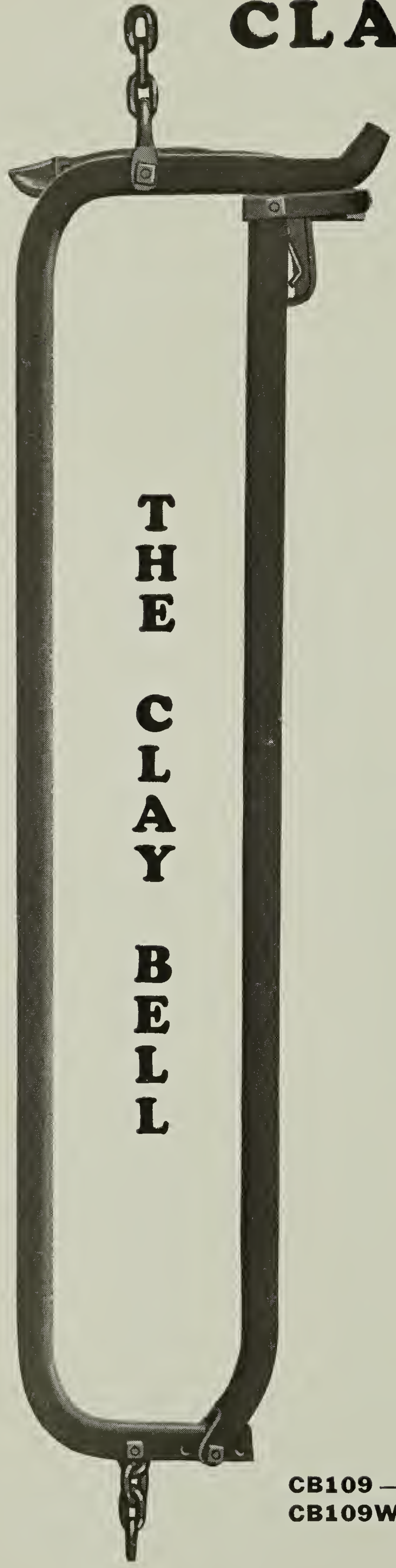
———5½″———

Guaranteed 3 Years

This stanchion when used for cows is guaranteed for 3 years against damages from any cause except fire. A special guarantee tag accompanies each bundle of stanchions.

No other firm has dared to GUARANTEE unconditionally their stanchion for this unusual period. It is your assurance of real strength, wearing qualities, and sturdy construction. We especially call your attention to the heavy construction of the head and latch bar which holds the opened side substantially when unlatched.

CLAY BELL STANCHION



Gilt-Edged Quality At An Amazingly Low Price

This low price stanchion combines all the essentials found in any good cow stanchion — rigid strength, simple construction, adjustable to fit large and small cows, cow proof lock, convenient to operate and offers utmost comfort for the cow.

Quantity buying of raw materials — quantity production and up-to-date factory facilities arranged for economical production enables us to give you outstanding stanchion value at an extremely low price. No skimping in quality of materials or workmanship. We welcome the closest inspection and comparison. Indeed the CLAY BELL stanchion is not built primarily to sell cheaply, but rather to give one-hundred percent satisfaction.

There may be cheaper stanchions on the market, but remember when you buy a cheap article you feel good while paying for it, but dissatisfied every time you use it. We could make the CLAY BELL stanchion cheaper by using lighter U-bar steel and cheaper castings. We could spend less time inspecting raw materials that go into this stanchion — we could skimp in the manufacturing and assembling. Use less expensive paint and spend less time finishing the stanchion, etc., but frankly it would not be CLAY quality.

It goes without saying that when you spend a dollar you want to get as much as possible for your dollar. That is wise buying. We believe, therefore, that every buyer of CLAY equipment is entitled to know what his dollar is buying and so we always give a detailed description and accurate specifications. See next page for specifications on the CLAY BELL stanchion.

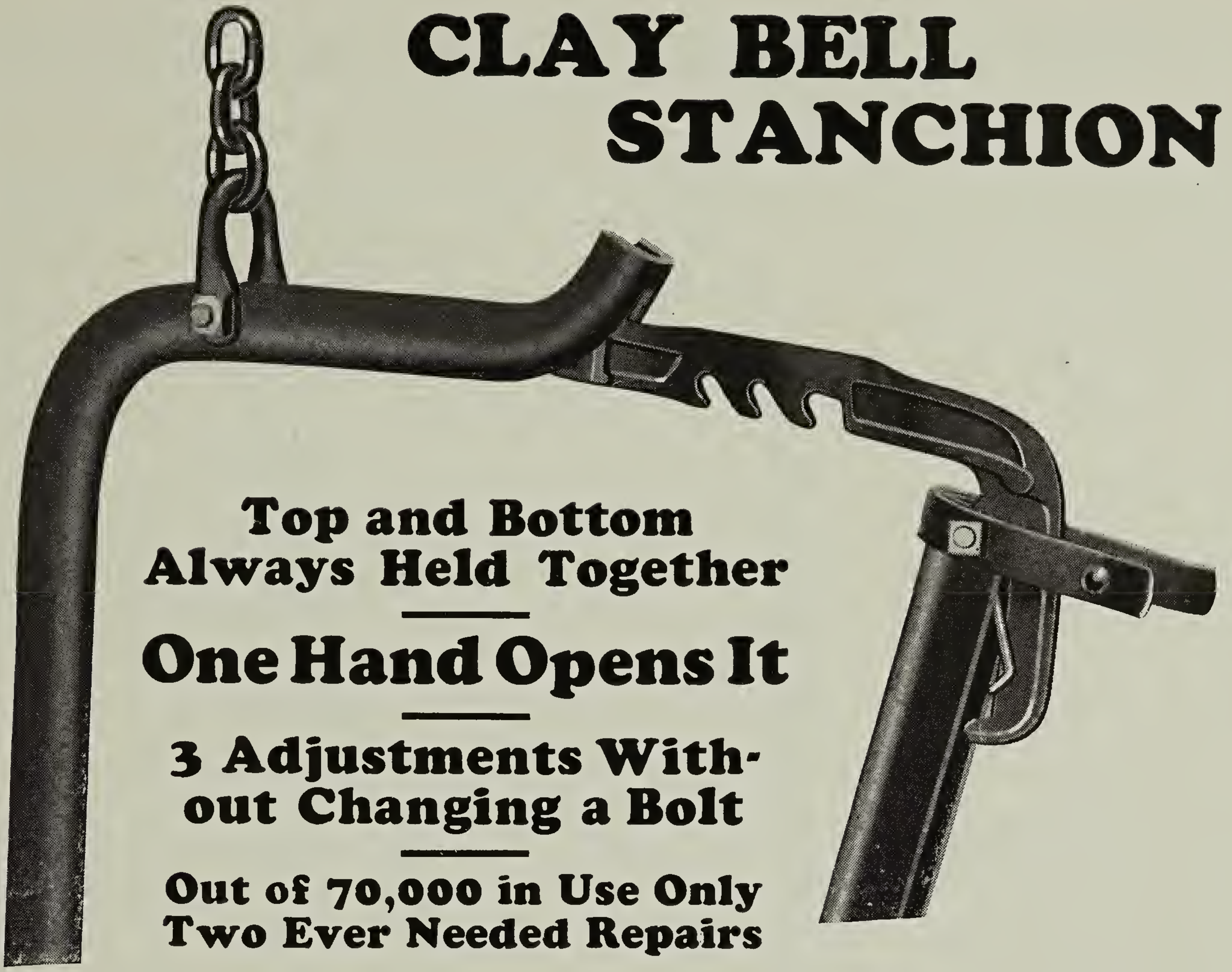
SPECIFICATIONS SEE PAGE 81

Enamel or Galvanized Finish.

CB109 — CLAY BELL. Plain side bars. Weight, 18½ lbs.
CB109WL — CLAY BELL. Wood lined. Weight, 19½ lbs.

Hanger and Anchors extra.

CLAY BELL STANCHION



Top and Bottom Always Held Together

One Hand Opens It

---

3 Adjustments Without Changing a Bolt

Out of 70,000 in Use Only Two Ever Needed Repairs

Guaranteed 3 Years

Closed Position Illustrated on Left Page

Specifications

Side bars of high carbon steel U-bar, rolled exclusively for us. 1¼"x1¼"x$\frac{3}{16}$".

Larger and 50% stronger than used in other stanchions.

Patented cow proof latch which engages at three different neck widths. Adjustable at the bottom.

Neck height 45". Higher than most stanchions, therefore, does not ride cow's neck.

Has hold open clip.

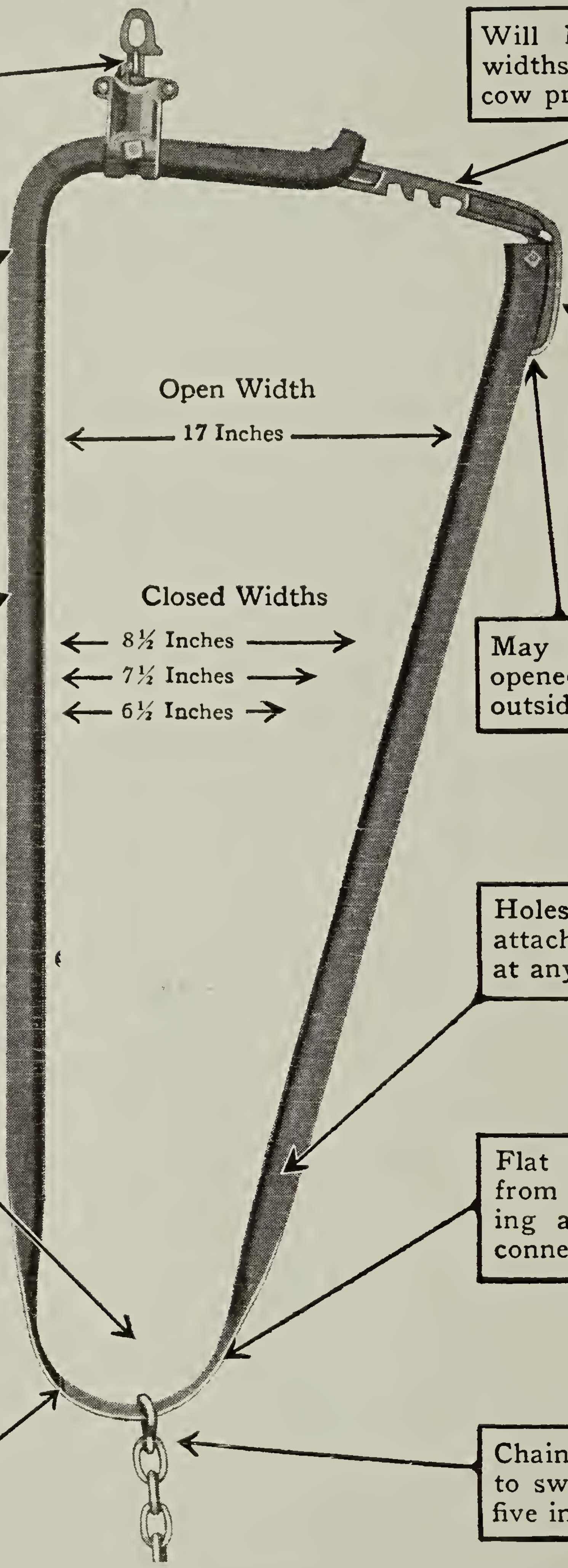
Heavy chain hangers three links and clevis at top and four links at bottom.

Wood lined bars, birch or maple, smooth and oiled.

Finish — *Grey enamel or hot dipped galvanized.*

Weight — 18½ lbs. With wood lining 20 lbs.

Clay Hingeless Stanchions



Swivel hanger permits stanchion to swing in any direction, but will always return to position in line with stall.

Will latch at three widths—guaranteed cow proof.

Side bars being held in head, they cannot fall and break.

Easily opened by one hand.

Whole frame is formed from one piece U bar steel, no corners or sharp edges.

May be locked or opened from inside or outside of stall.

Holes in side bars for attaching Sure Stops at any time.

Cow can arise or lie down with ease—prevents bruised shoulders and big knees.

Flat bottom formed from the U bar making a broad, flexible connection.

Expensive hinge castings, bolts, rivets and other extras eliminated.

Chain permits bottom to swing in radius of five inches.

This Bottom Flat Section

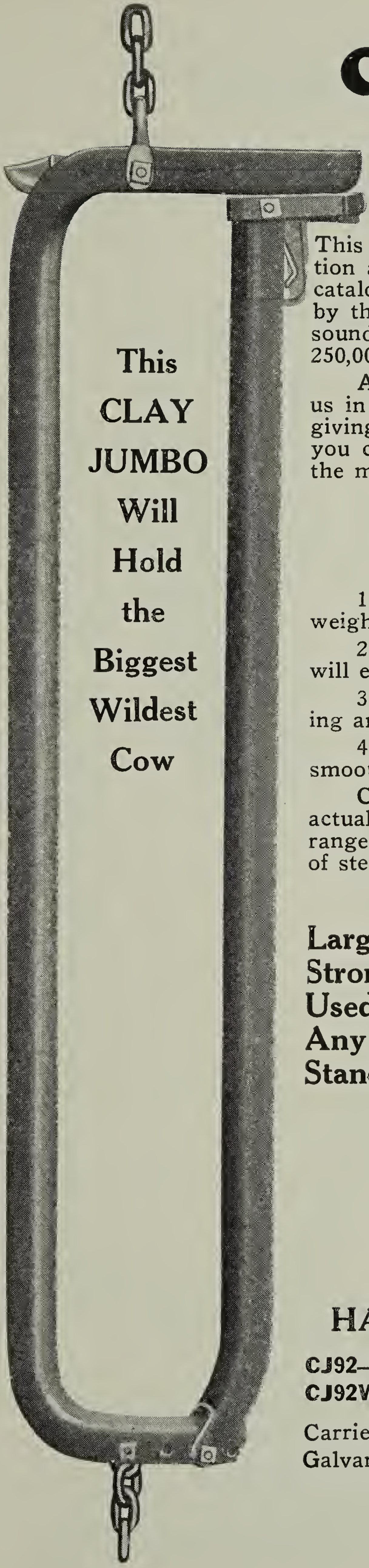
Is 4½″ wide and guaranteed not to break.

Furnished Enamel Finish Only.

HE108 — CLAY Hingeless Stanchion. Weight, 18 pounds.

HE108WL — CLAY Wood Lined Stanchion. Weight, 20 pounds.

CLAY JUMBO



BIG BROTHER TO THE POPULAR "CLAY BELL" STANCHION

This stanchion is in general design, latch, and in operation almost identical with the Clay Bell pattern, general catalog pages 80-81. The remarkable satisfaction given by the Clay Bell stanchion led us to duplicate the same sound practical features in this new heavier pattern. Over 250,000 Clay Bell stanchions now in use.

After months of research $1200.00 was invested by us in special steel mill rolls to secure a shape of U-bar giving the maximum strength. This has been done so you can secure the utmost in strength and durability at the minimum cost.

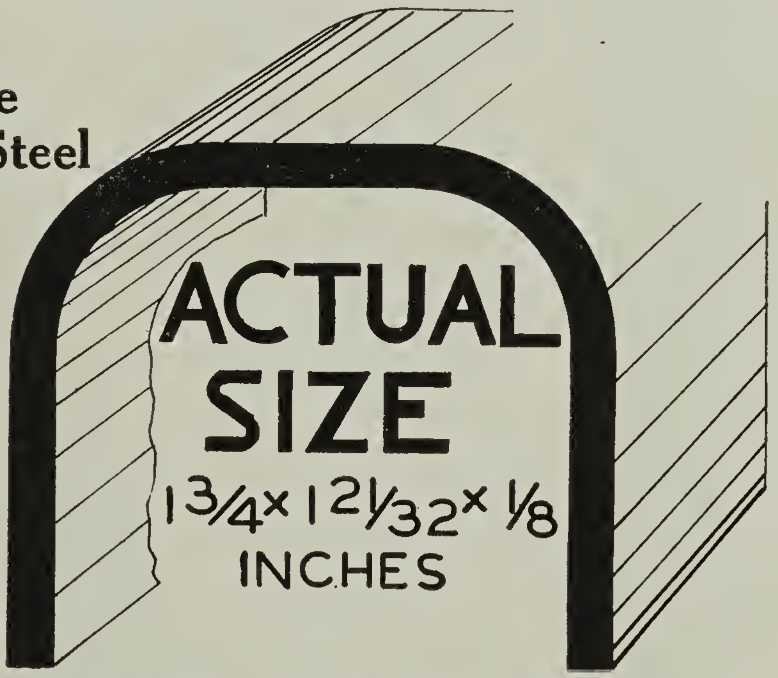
IMPROVEMENTS

(As Compared to the Clay Bell)

1. 50% increased strength (only a small increase in weight and cost).
2. Opens wide enough so that the hold open fork will engage a stall post on stalls 3 ft. 6 in. wide.
3. The top clevice is both wider and higher providing ample clearance for the latch.
4. The upper end just above the latch is finished smoother with a malleable casting arc welded in place.

Compared to the strength of other stanchions by actual physical test of seven patterns, the Clay Jumbo ranges from 30% to 80% stronger than any other make of steel stanchion on the market today.

**Largest Size
Strongest Steel
Used in
Any Cow
Stanchion**



HANGERS AND ANCHORS EXTRA

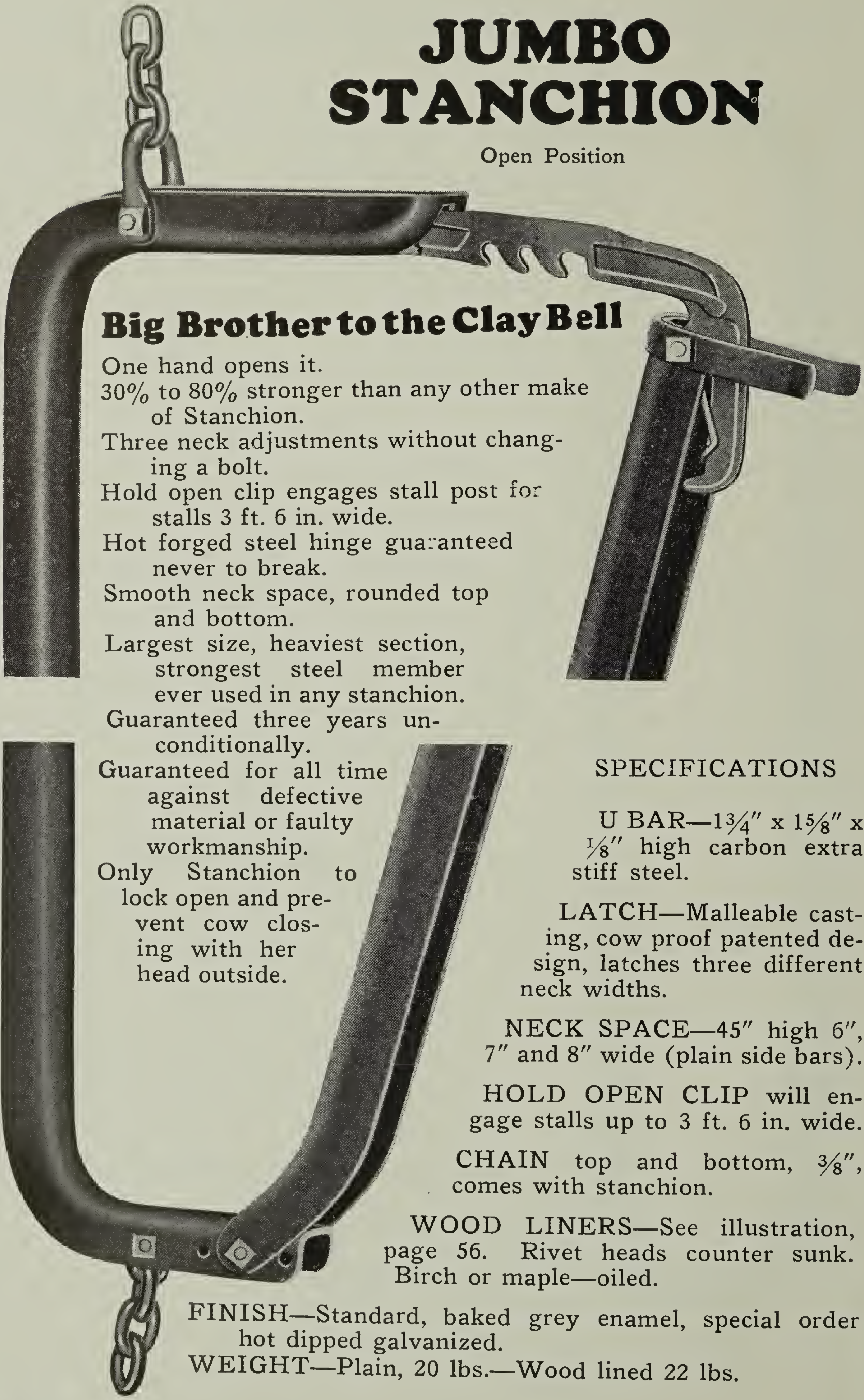
CJ92–CLAY JUMBO, Plain side bars, Wt. 20 lbs.	$2.80
CJ92WL–CLAY JUMBO, Wood lined, Wt. 22 lbs.	$3.30

Carried in Stock, Grey Baked Enamel.

Galvanized, Two Weeks Delivery, extra	$ .75

JUMBO STANCHION

Open Position



Big Brother to the Clay Bell

One hand opens it.

30% to 80% stronger than any other make of Stanchion.

Three neck adjustments without changing a bolt.

Hold open clip engages stall post for stalls 3 ft. 6 in. wide.

Hot forged steel hinge guaranteed never to break.

Smooth neck space, rounded top and bottom.

Largest size, heaviest section, strongest steel member ever used in any stanchion.

Guaranteed three years unconditionally.

Guaranteed for all time against defective material or faulty workmanship.

Only Stanchion to lock open and prevent cow closing with her head outside.

SPECIFICATIONS

U BAR—1¾″ x 1⅝″ x ⅛″ high carbon extra stiff steel.

LATCH—Malleable casting, cow proof patented design, latches three different neck widths.

NECK SPACE—45″ high 6″, 7″ and 8″ wide (plain side bars).

HOLD OPEN CLIP will engage stalls up to 3 ft. 6 in. wide.

CHAIN top and bottom, ⅜″, comes with stanchion.

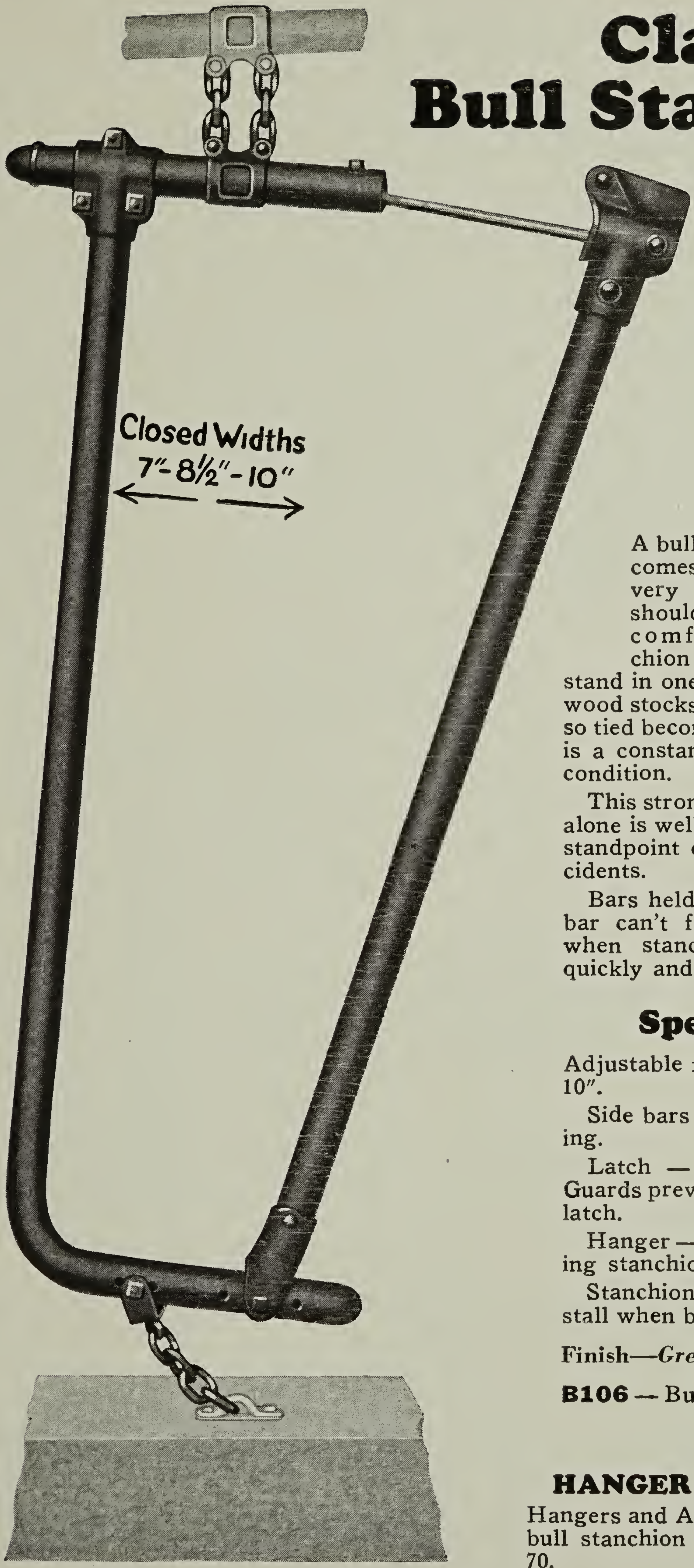
WOOD LINERS—See illustration, page 56. Rivet heads counter sunk. Birch or maple—oiled.

FINISH—Standard, baked grey enamel, special order hot dipped galvanized.

WEIGHT—Plain, 20 lbs.—Wood lined 22 lbs.

16,000 11-33 MCO.

Clay Bull Stanchion



Better Be Safe Than Sorry

A bull when uncomfortable becomes dangerously ugly and very difficult to handle. He should be securely tied in a comfortable swinging stanchion rather than forced to stand in one position with stiff rigid wood stocks around his neck. A bull so tied becomes very irritable, which is a constant drain on his physical condition.

This strong CLAY steel stanchion alone is well worth its cost from the standpoint of assurance against accidents.

Bars held together at top — side bar can't fall away and get bent when stanchion is open. Bull is quickly and securely tied.

Specifications

Adjustable for neck space—7″, 8½″, 10″.

Side bars — 1⅝″ heavy steel tubing.

Latch — positively bull proof. Guards prevent animal from opening latch.

Hanger — has double chain allowing stanchion to swing freely.

Stanchion swings straight with stall when bull is released.

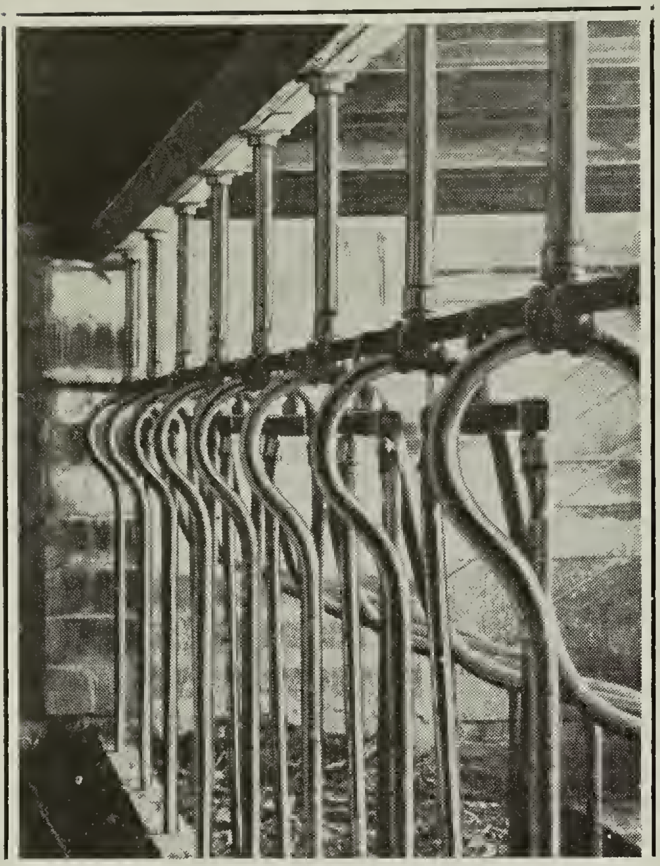
Finish—*Grey enamel or galvanized.*

B106 — Bull Stanchion, 29 pounds.

HANGER AND ANCHOR

Hangers and Anchors designed for this bull stanchion are illustrated on page 70.

Clay Extension Columns

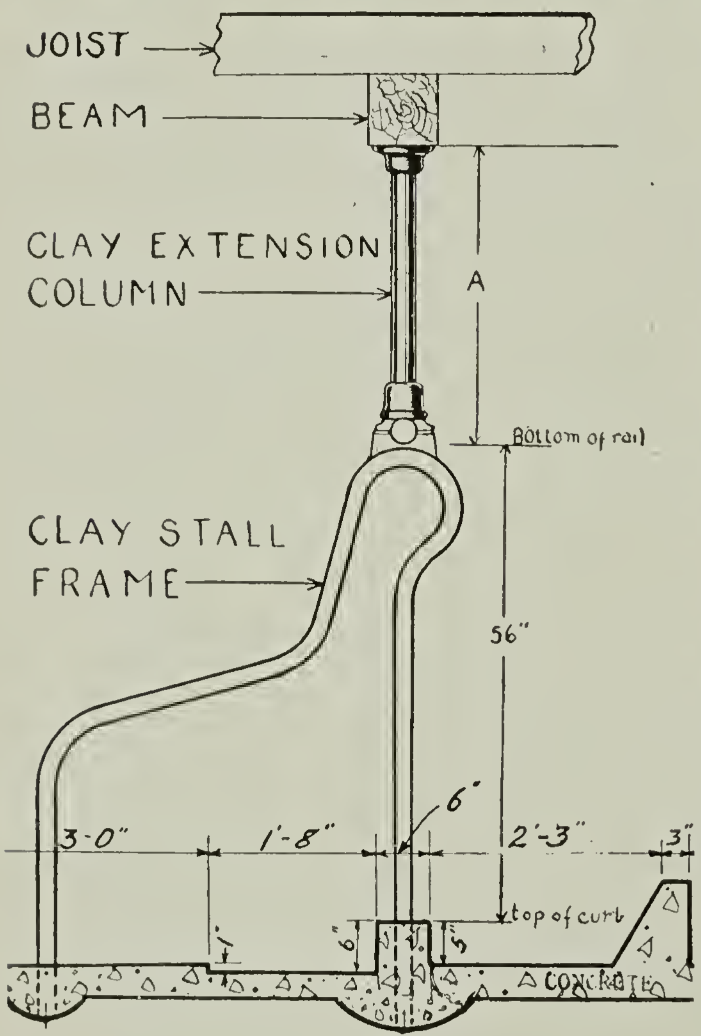


WHEN it is possible to use a beam over the stall row the CLAY Extension Column mounted on top of the arch stall frame (G111) makes a support that is dependable and economical. It is constructed of heavy steel tubing 1.9" O. D. It is provided with a cap under the beam and fits into a threaded base 2½" which provides adjustment, so that each Extension Column fits the beam above.

This construction gives the stall frame even greater strength and rigidity, effects saving of material, floor space and cost. A test of this construction only 7′ long, the beam not braced by joists attached to it and the beam not supported on outside walls, held 13,000 lbs.

When ordering specify dimensions 'A' in the diagram below. Finished gray enamel or galvanized.

EC137 — Extension Column, 15 pounds.
(Not over 3 feet long)

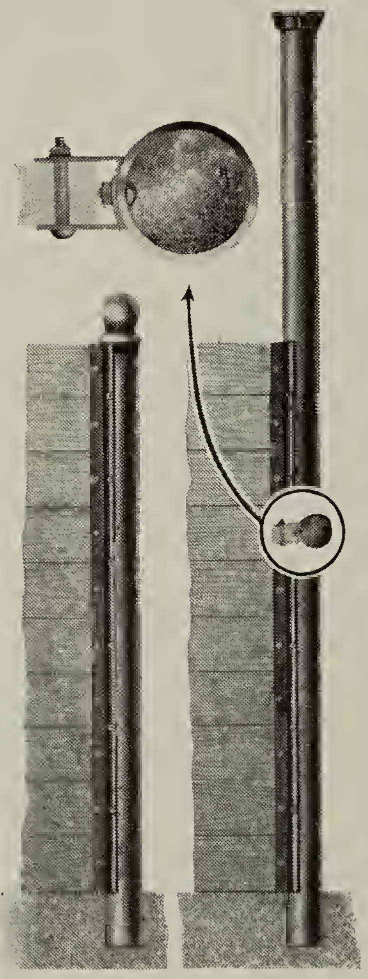


Columns for Horse Stalls

As illustrated columns for the rear of horse stalls are made up of standard columns with ball caps or flat caps if posts extend to the beam and with a 2"x2" specially formed channel. When ordering send sketch showing length of columns and exact location of channel on column. Shipped complete with bolts.

BC140 — Channel 2"x2", per ft. 1.6 lbs.

Columns see page 85.



Ornamental Column Caps

[Flat Caps See Page 85]

BALL CAPS

	Size Pipe	Wt. lbs.
4D	1⅝"	¾
F1	1.9"	1½
F5	2⅜"	2¼
B3	3"	3
B3½	3½"	4
B4	4"	5
B5⅜	5⅜"	8½

OVAL CAPS

	Size Pipe	Wt. lbs.
B3	3"	1.47
B3½	3½"	1.95
B4	4"	2.45

BARN COLUMNS

Steel columns insure rigid support, never absorb moisture or rot out at the floor line as do cumbersome wood posts. Illustration shows barn columns with cast iron bases and caps; caps at least are necessary. It is advisable when installing reclaimed flue columns BC138B to fill with cement.

Columns are shipped without cement filler, without caps and bases unless otherwise specified. When caps and bases are used allow ¾″ additional height.

Columns finished gray enamel. Even the smallest size 2⅞″ column is equal in strength to a 4″x6″ wood posts, and the largest size equal to 10″x10″ wood post.

We offer three grades of barn columns.

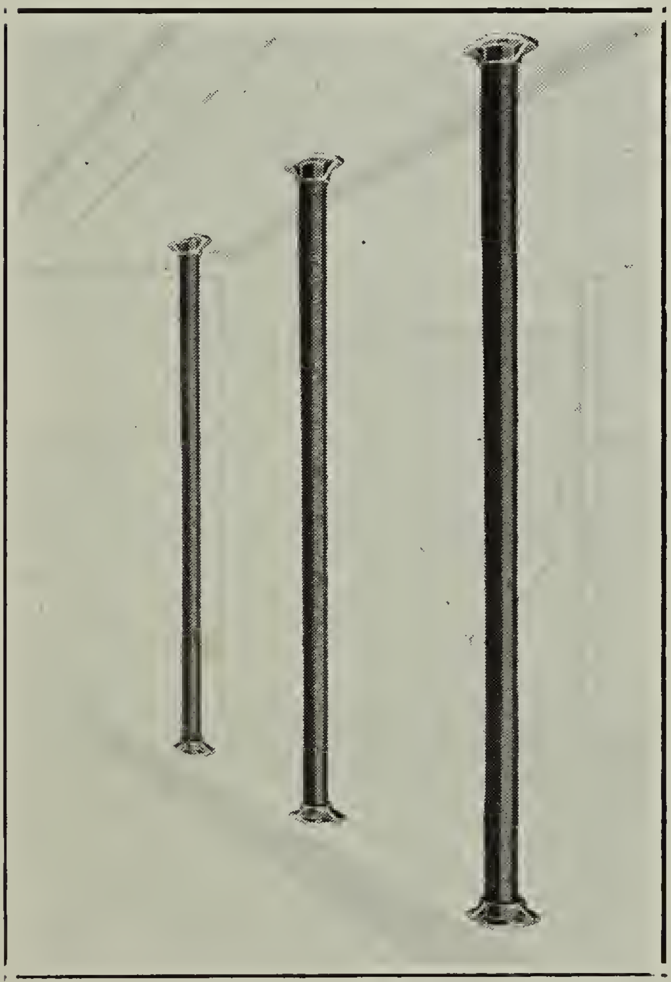
BC138 — New full weight welded pipe, grey paint.
BC138A — Flue tubing hot dip galvanized.
BC138B — Reclaimed flues cleaned and painted grey.

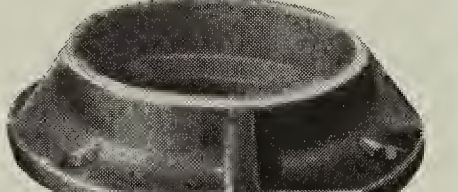
When ordering specify length, diameter and grade by catalog number.

Outside Diam.	Length	**BC138** Wt.	**BC138A** Wt.	**BC138B** Wt.
....	....	..	..	..
....	....	..	..	..
3½″	7′6″	56	..	35
3½″	8′0″	60	..	37
4″	7′6″	67	42	40
4″	8′0″	72	45	42
5⅜″	7′6″	..	..	56
5⅜″	8′0″	..	..	60

Cut to length, add 30c cutting charge. **BC138A** — F. O. B. Rockford, Ill. **BC138A** can be supplied in other than 4″ size at equivalent prices on reasonable notice.

Heavy full weight column **BC138** can be supplied galvanized on special order.

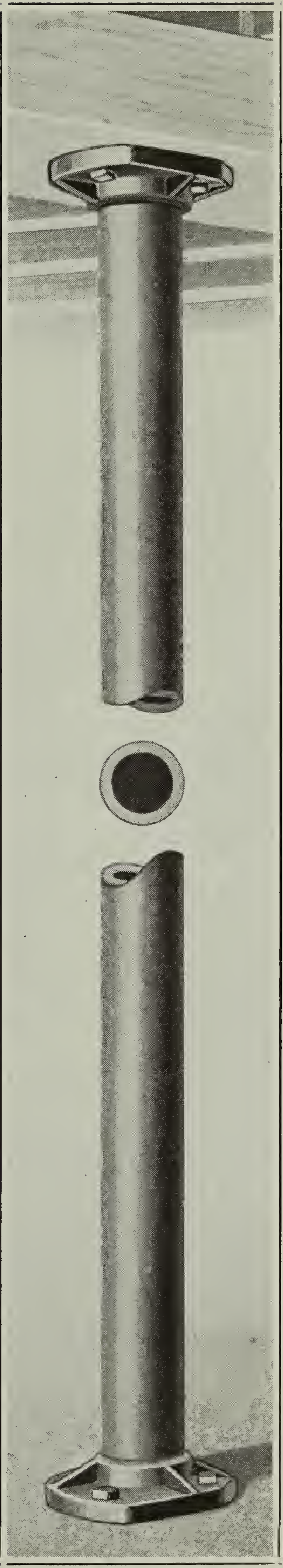




CAPS and BASES

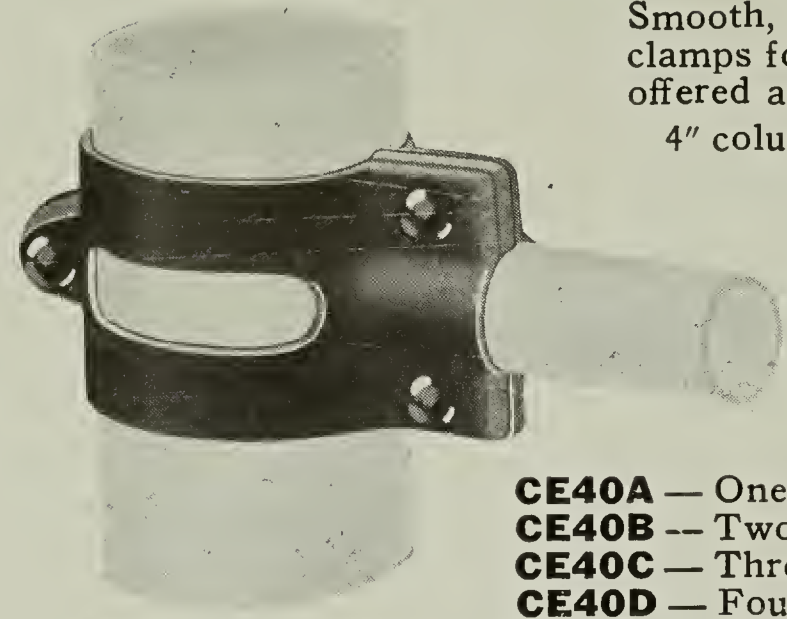
ME1⅝	0.7 lbs.
ME1.9	1.6 lbs.
ME2⅜	1.4 lbs.
ME3	2.4 lbs.
ME3½	3.7 lbs.
ME4	4.4 lbs.
ME5⅜	6.5 lbs.

Figures indicate outside diameter of columns caps will fit.



COLUMN CLAMPS

For 4-inch Steel Column Only

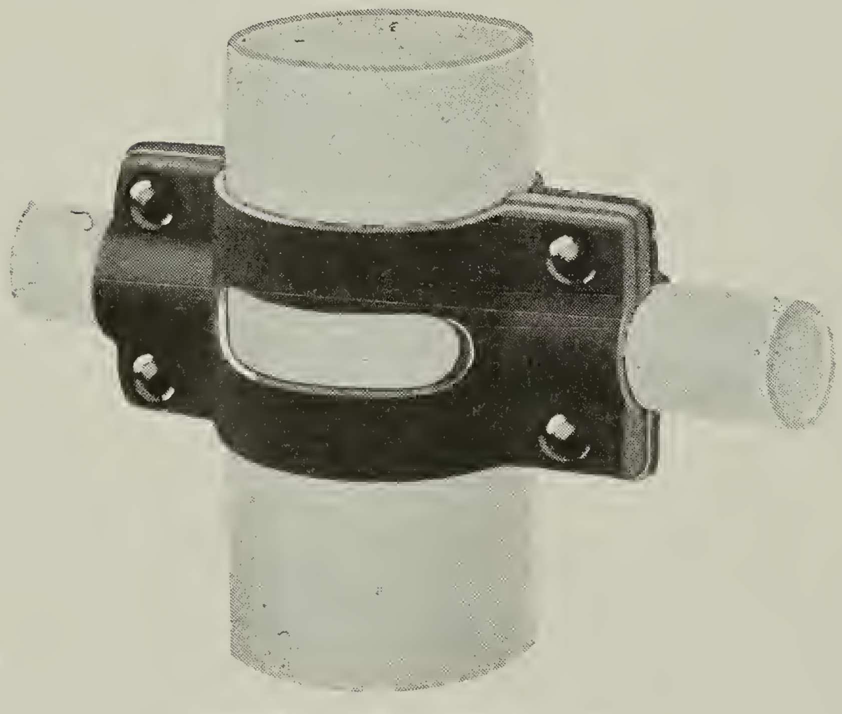


ONE WAY

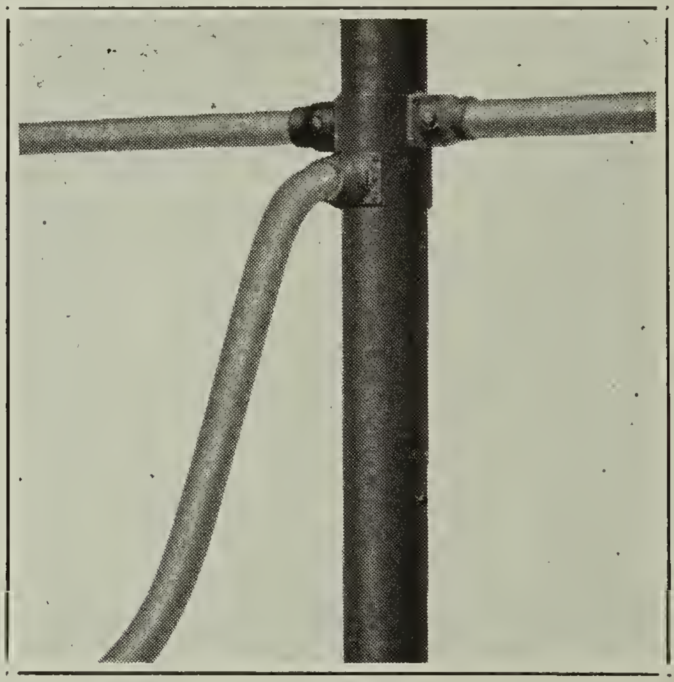
Smooth, tight fitting, dust proof malleable clamps for use with 4″ barn columns are now offered at considerable saving in cost.

4″ columns are most generally used in dairy barns—thus the malleable fiitting can be used in most cases. However, on columns of different diameter we recommend the steel column clamps listed at bottom of this page.

CE40A	One way	wt. 2.17 lbs.
CE40B	Two way	wt. 2.57 lbs.
CE40C	Three way	wt. 3.73 lbs.
CE40D	Four way	wt. 4.88 lbs.
CE40E	Elbow or corner	wt. 3.00 lbs.



TWO WAY



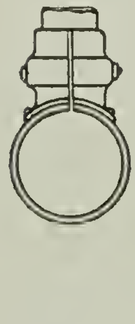
CE15F — CLAMP

This special clamp is used at junction of stall partition and stall rail for stall No. 1.

Malleable and Steel Clamps

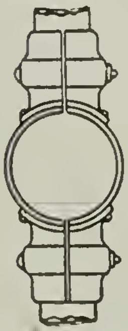
(Order This Style Clamp For Other Than 4″ Columns)

One Way



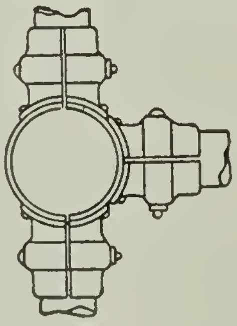
CE15A

Two Way



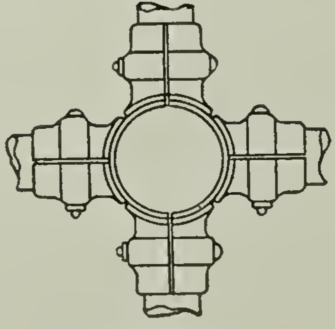
CE15B

Three Way



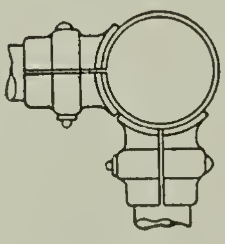
CE15C

Four Way



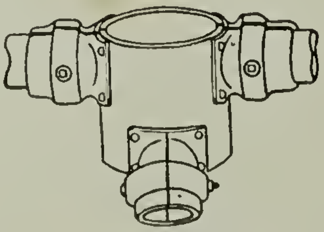
CE15D

Two-Way Elbow



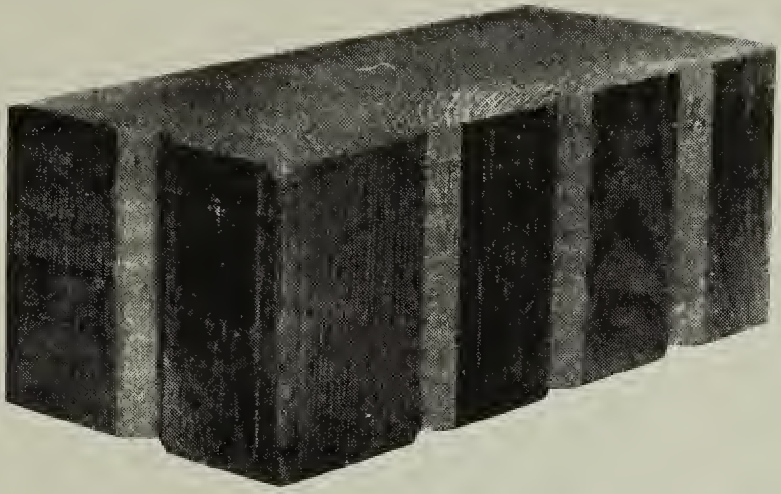
CE15E

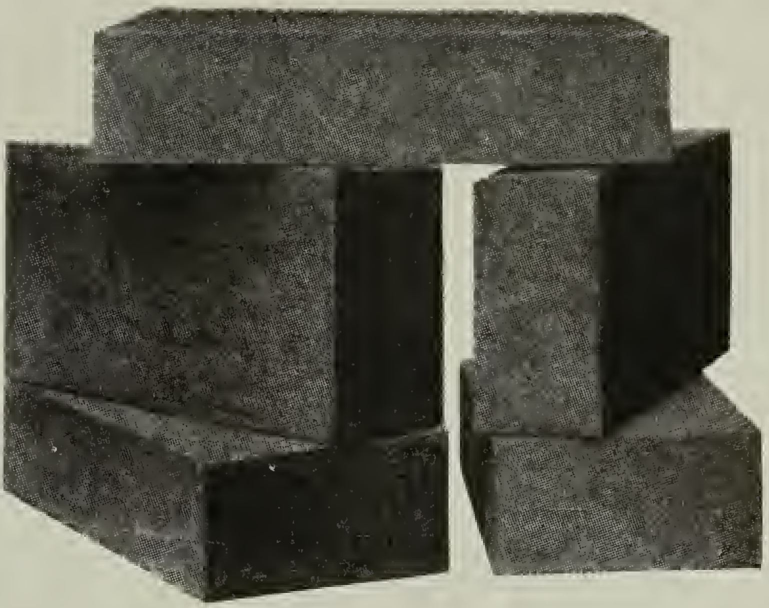
Three-Way Offset



CE15F

Estimated weight 3 to 4 lbs. each made in size to fit columns 3″, 3½″, 4″, 4½″ and 5⅜″. Specify column size. Clamps fit rail 1⅝″ outside diameter.





The cushioning and restful effect is of real importance to the feet of all live stock, but this is particularly true with horses, with heavy hogs and with dairy cows.

Samples of either Creosoted Wood Blocks or Cork Bricks gladly mailed on request.

CREOSOTED WOOD BLOCKS

Creosoted wood blocks or cork bricks are ideal for cow stalls. Stall platforms are often cement construction. Consideration should be given to the fact that cows are confined in an almost stationary position for so many hours of the day during winter months. It is common knowledge that the cow's output in milk production is closely related to her comfort and ease.

CORK BRICK

Cork bricks are made out of finely granulated cork and refined asphalt. They measure 2″ thick, 4″ wide and 9″ long. Four bricks will cover one foot of floor area. One square foot requires approximately 1 pound of asphalt. Weight per sq. ft., 9 pounds.

CORK BRICK—F. O. B. Beaver Falls, Pa.

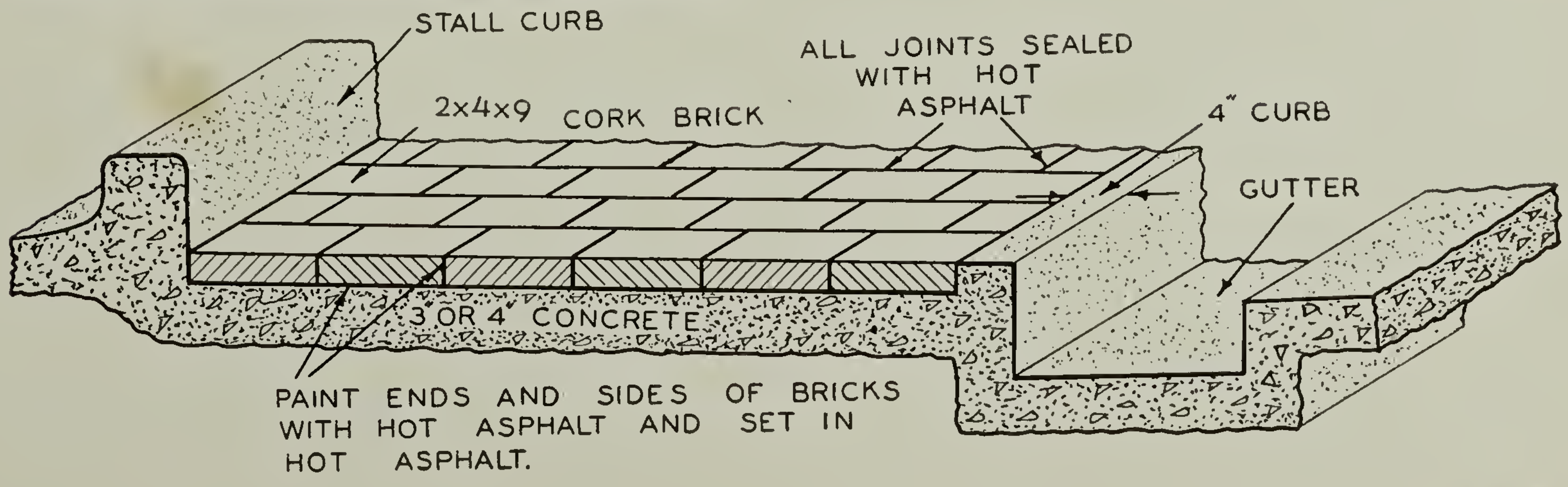
Creosoted Wood Blocks make a smooth floor, certainly very much easier on the animals than worn planks and because of the end grain protruding, wood blocks do not become slippery when wet. While horse stalls present a problem in themselves because of excessive wear, again Creosoted Wood Blocks provide ideal flooring.

The State Department of Agriculture in their bulletin No. 141 gives some startling facts about the wearing quality of creosoted blocks. One can safely say they will outlast the barn. They have been thoroughly inpregnated by the vacuum system with 12 lbs. per cubic foot of Creosote, almost impervious to rot and moisture. They will not harbor disease germs.

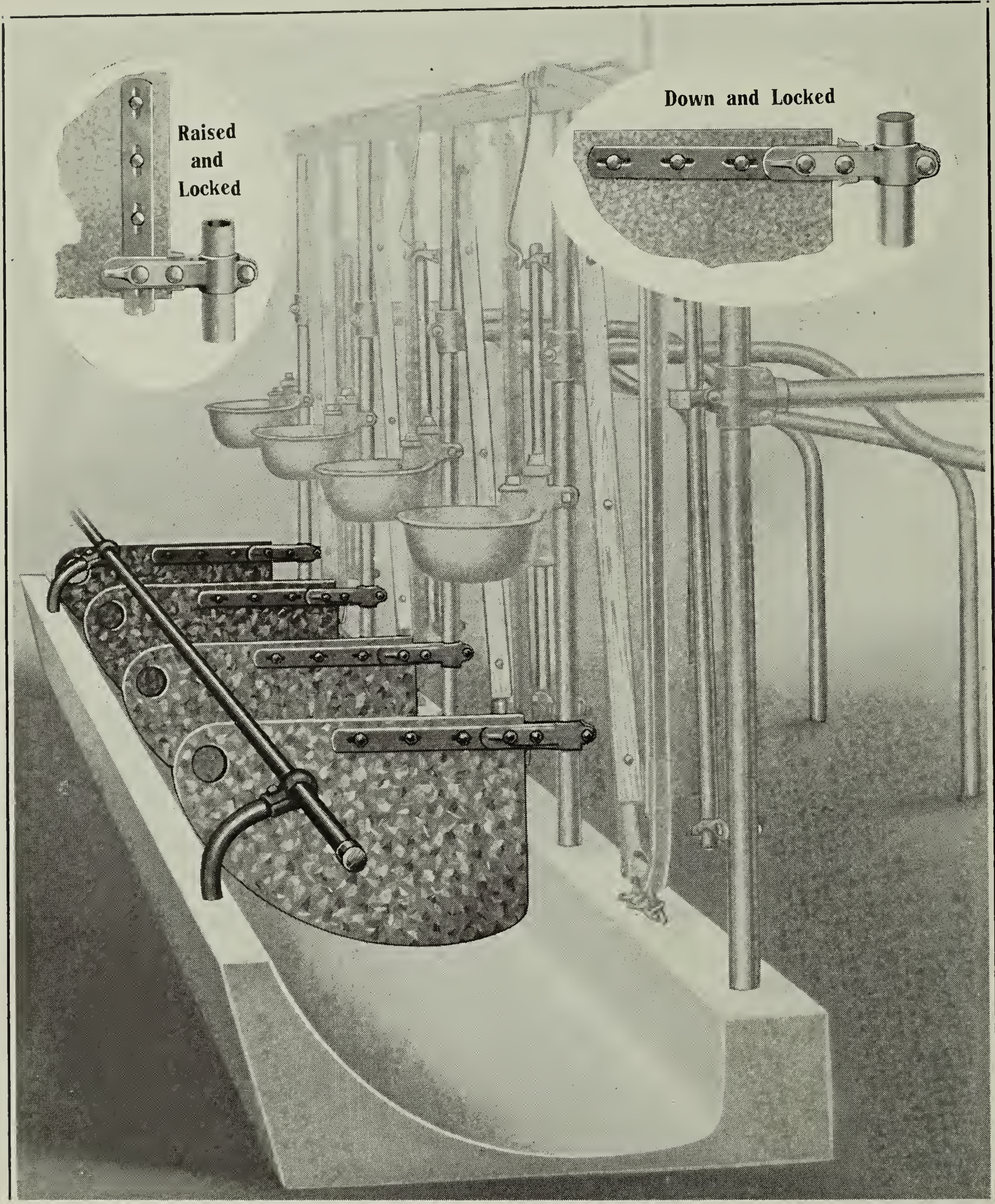
Creosoted Wood Blocks
F. O. B. Indianapolis

Thickness	Width	Length	Weight Per Sq. Yard	Pitch Required Per Sq. Yard
2 ″	3½″	5½″	80 lbs.	11 lbs.
2½″	3¾″	5⅝″	90 lbs.	12 lbs.
3 ″	3¾″	7¾″	100 lbs.	14 lbs.

Pitch for setting is not furnished because it can usually be secured locally from Roofing Companies and City Street Departments.


STALL CURB
2x4x9 CORK BRICK
ALL JOINTS SEALED WITH HOT ASPHALT
4″ CURB
GUTTER
3 OR 4″ CONCRETE
PAINT ENDS AND SIDES OF BRICKS WITH HOT ASPHALT AND SET IN HOT ASPHALT.

MANGER DIVISIONS



CLAY Manger Divisions give each cow a chance to eat her full rations without annoyance. Eliminates big knees caused by reaching for feed intended for neighboring cows.

A marvel of simplicity. Locks in position both when down and when raised. To lift it a slight pull out and up releases the hinge. When completely raised it drops vertically by means of the slotted hole and thus locks in the raised position.

M115A — Manger division for $1\frac{5}{8}''$ stall partition. Weight 12 lbs.

M115B — Manger division for 4″ column.

M115AT — Manger templates per pair, wt. 7 lbs. Order templates according to manger designs page 89.

MGR — Manger Guard Rail. Rail $1\frac{5}{16}''$ O. D. Pipe-supports spaced every two stalls.

Manger Templates

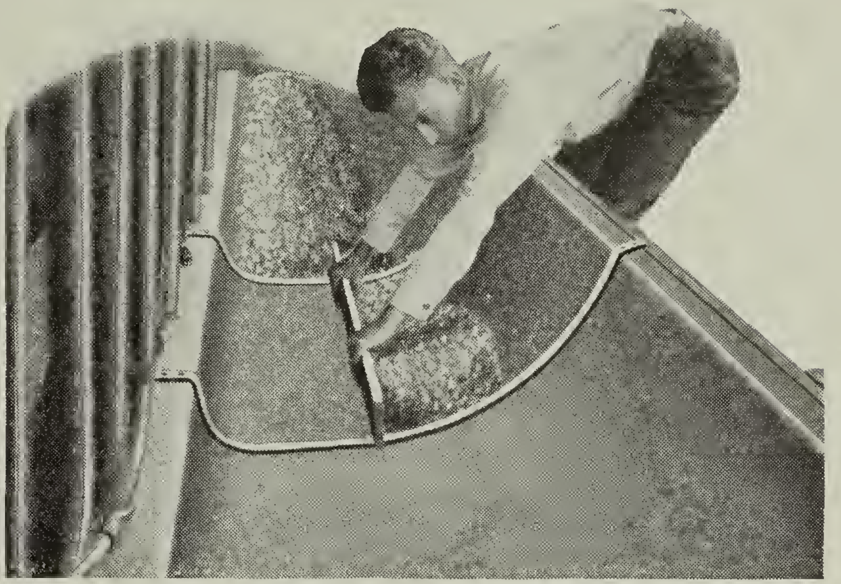


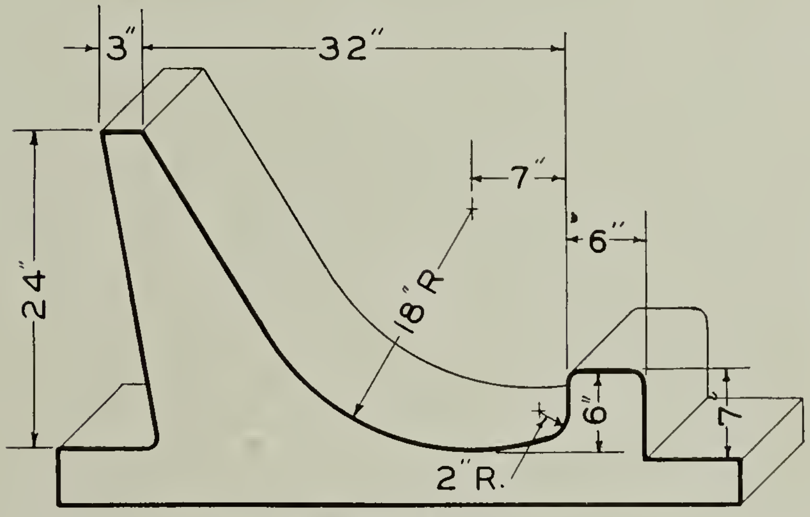
Illustration shows an easy method to build the CLAY standard manger. We furnish the steel forms, or templates, for this work, and as a result, the CLAY Manger Divisions will fit snugly.

The manger is easily and quickly cleaned with a broom, or may be flushed with water.

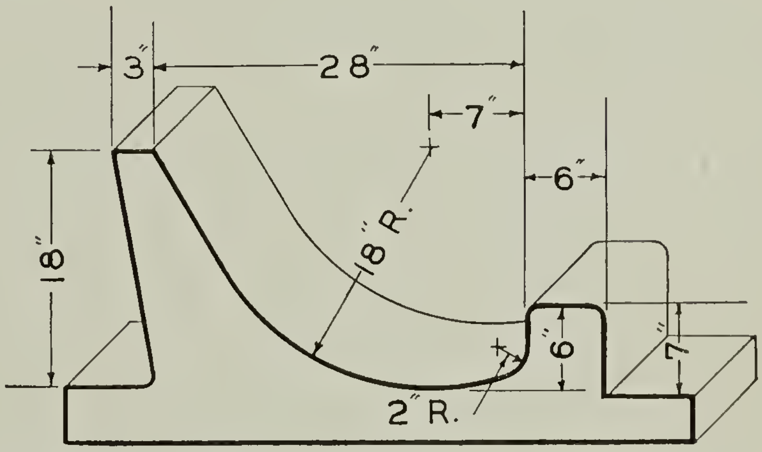
We repeat, that CLAY Standard Manger Forms (or templates) will be furnished free upon request when Manger Divisions are ordered, else a slight extra charge is made for these templates.

M115AT — Manger Template. Weight per pair 7 lbs.

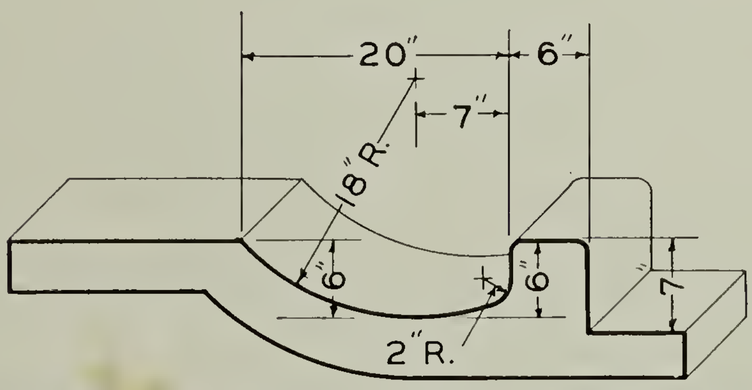
Standard Manger Sizes



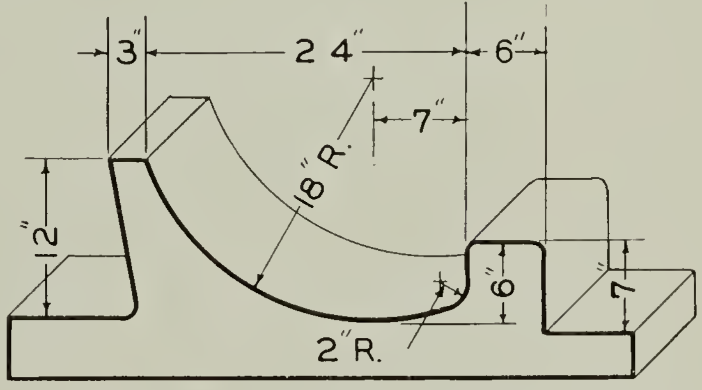
Style A — Extra High Manger.



Style B — High manger.



Style C — Low manger with raised feed alley.



Style D — Medium High manger.

The above diagrams show four styles of mangers — for which we can furnish templates. They are all uniform except the height of manger front. Our standard manger division will fit any one of them.

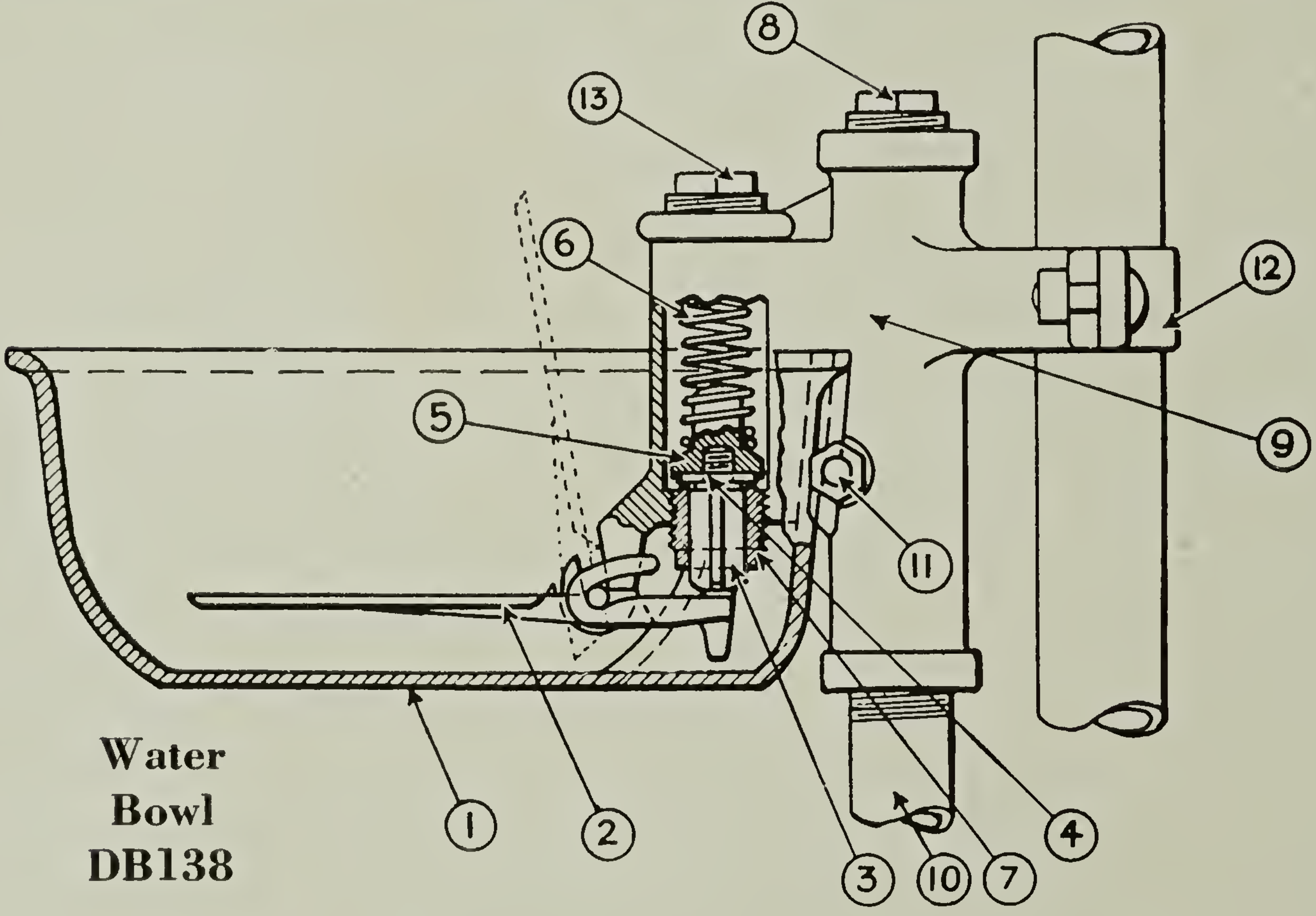
These are the standard designs recommended by American Society of Agriculture Engineers.

Clay Water Cups Are Easy To Clean

It is obvious to any thinking man that it is neither sanitary nor safe for all cows in a herd to drink from the same tank. A single diseased cow may spread the germs of her disease through the entire herd simply by contaminating the water in the drinking trough.

Cows are subject to many diseases that are contagious and infectious and it is desirable to clean cups occasionally, or thoroughly disinfect all the cups. The CLAY detachable bowl is easily removed and thoroughly cleaned. Hay or litter is quickly removed by lifting the paddle and swabbing out the bowl with hand or brush.

How Clay Cups Are Constructed



Water Bowl DB138

Cross Section Explained

1. Cast iron bowl.
2. Malleable paddle that cow operates.
3. Brass valve plunger.
4. Rubber gasket held between two sections of brass valve plunger.
5. Upper section valve plunger that holds gasket.
6. Brass spring.
7. Valve seat with hexagon end at bottom to act as nut to remove.
8. Plug to close top of supply housing. Used at top for under feed supply pipe.
9. Valve housing.
10. Water supply pipe 1″, ($1\frac{5}{16}''$ O. D.)
11. Locking nut to hold bowl in position.
12. Clamp around stall 1⅝″ O. D. posts. Clamps for larger column or lag screws for fastening on wood frame stall can be supplied.
13. Plug for easy access to valve.

Want Extra Milk Profits?

CLAY

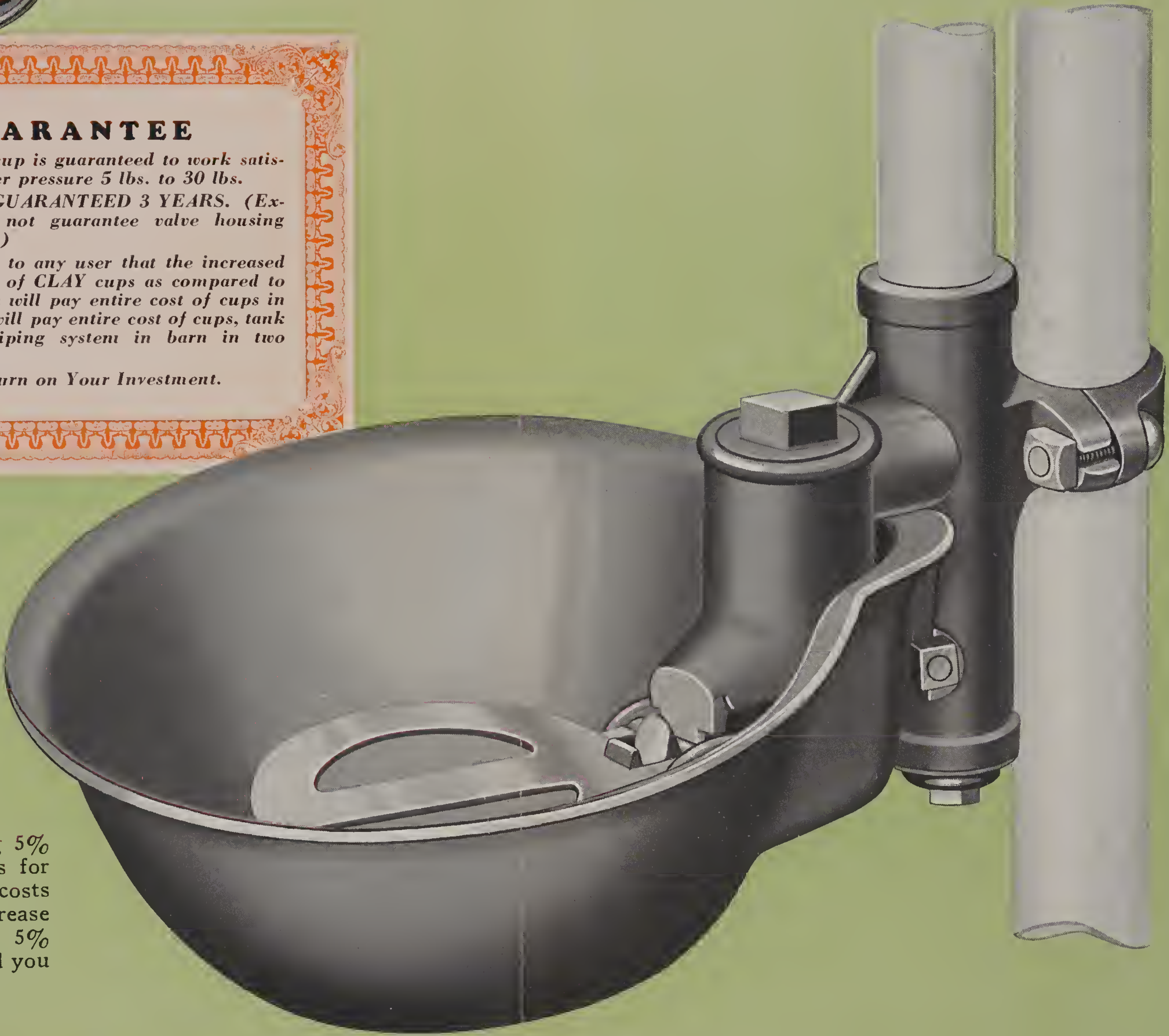
GUARANTEE

This automatic cup is guaranteed to work satisfactorily on water pressure 5 lbs. to 30 lbs.

ALL PARTS GUARANTEED 3 YEARS. (Excepting we do not guarantee valve housing against freezing.)

We guarantee to any user that the increased milk due to use of CLAY cups as compared to watering at tank will pay entire cost of cups in one winter and will pay entire cost of cups, tank in mow and piping system in barn in two winters.

50% Return on Your Investment.



If you are now making 5% net profit after charges for feed, labor and housing costs are deducted just increase your milk yield only 5% more by water cups and you will double your profits.

DB138—Detachable Water Bowl · · 14½lbs.

Just Like Owning An Extra Cow

WATER is vitally essential to cows, particularly because milk is 87% water, but are you aware that hundreds of carefully conducted tests prove the ordinary method of watering two or three times a day is not enough?

A cow milking 30 pounds daily drinks nearly 100 lbs. of water each day. Can we imagine an 1100 lb. cow drinking nearly 1/10 of her weight of ice cold water at once? No, consequently she wont produce 30 lbs. of milk even tho she has the ability and has feed enough as well. Milk flow is cut down quicker by lack of water than by poor feed.

Naturally an icy tank discourages thirst. Why shouldn't it affect your cows as it would affect you or me?

Gulping, twice daily, quantities of cold water to quench thirst chills the stomach and retards digestion. Excessive drinking twice a day does not help in the hours when the lack of water prevents maximum efficiency in milk production. Instead, tempt your cows to drink more water by the use of water bowls. The average cow will increase her consumption of water nearly three gallons daily with resulting increased milk yield.

Water is a feed, just as much so as grain, and just as vital to the body functions. Isn't it false economy when water is so cheap to limit the supply for lack of a little equipment?

Milk Gain Proved By Careful Tests

The gain per day per cow 2 lbs. x 20 cows = 40 lbs. x 130 days (Winter months only) = 5,200 lbs. x $2.00 per cwt. = $104.00. No more feed — no more labor, $104.00 net increased profit.

Now Isn't This Just Like Owning Another Cow—

But without the work, no cost for feed, but all the profit clear.

Aside from the advantages of disease prevention and aside from the time and labor saving, buy water bowls for your pocketbook's sake.

Clay Drinking Cups Don't Cost You a Cent

Anything that pays for itself costs nothing. A CLAY drinking cup installation in your barn will pay for itself in one winter thru saving of time, labor, in better cow health and increased milk production.

CLAY EQUIPMENT CORP.
CEDAR FALLS, IOWA

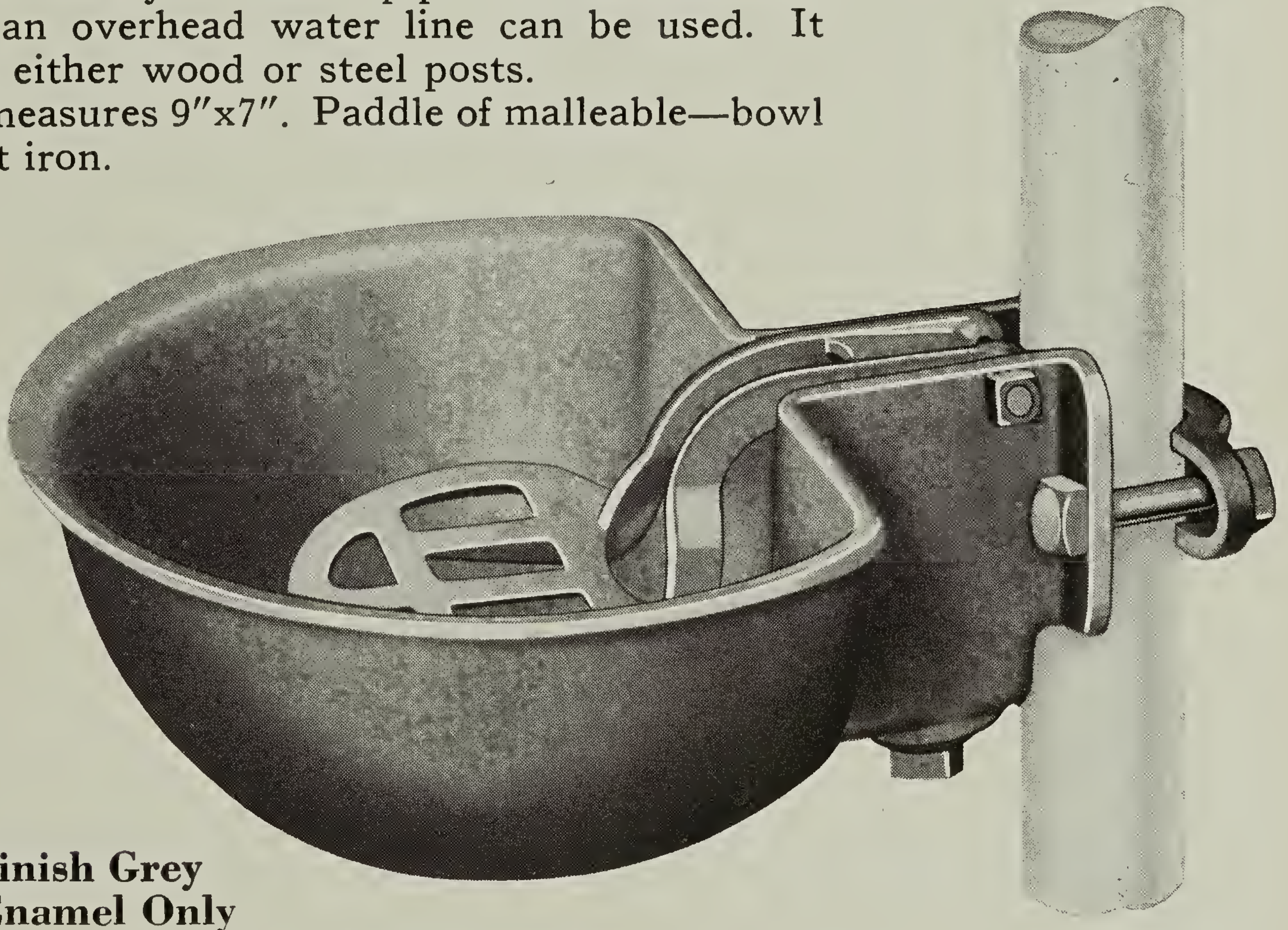
A Dependable Water Bowl At Lowest Possible Price

WHILE this low priced CLAY water cup is not so-called "detachable" an occasional cleaning is all that is ever necessary and this is quickly and easily accomplished by raising the paddle and swabbing out with hand or brush.

A drinking cup can be ever so fancy in design, unless the construction and operation is simple it may give trouble. Here is a cup so outstandingly simple it is almost trouble proof. The pressure valve is simple, consisting of merely a non-rusting inlet valve operated by the paddle. The cow presses the control paddle with her nose while drinking, when the paddle is released. The Fuller ball valve is kept closed by the pressure of the water, and by a brass coil spring. This bowl works equally well under low or high pressure. In fact is suitable for pressure as high as 90 lbs. — will not splash or spray water when cow operates paddle. However, to prevent excessive wear we advise use of a pressure reducing valve when pressure is over 30 lbs.

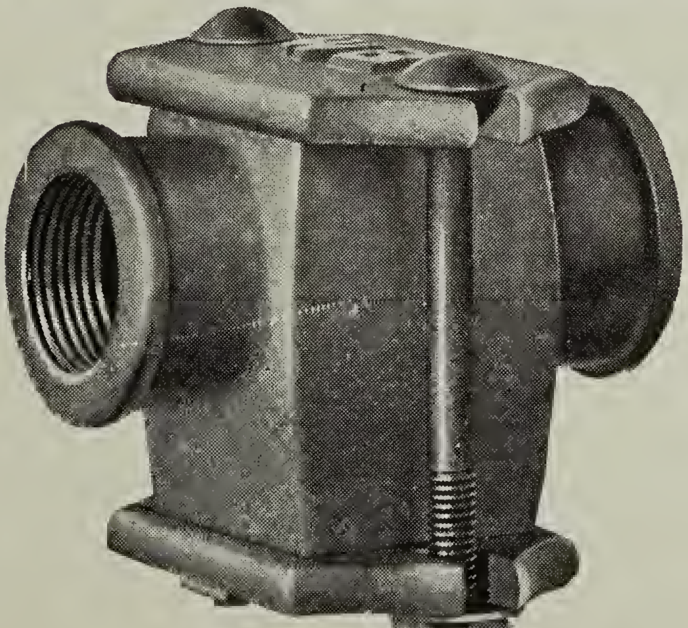
Cup is fed by 1″ water pipe from underneath, although an overhead water line can be used. It fastens to either wood or steel posts.

Cup measures 9″x7″. Paddle of malleable—bowl heavy cast iron.



Finish Grey Enamel Only

No. SB138 — Stationary water bowl. Weight, 11 pounds.



Clay Water Strainer

A very important unit of the CLAY Drinking Cup System. Placed next to the supply tank, all water must pass thru a fine mesh brass screen before entering the cups. Prevents dirt and pieces of straw from getting into the water line and control valves of the drinking cups. It is very easily taken apart and cleaned. This is done without flooding the barn, by shutting off the water and taking out the brass screen and cleaning out, then replacing bolts.

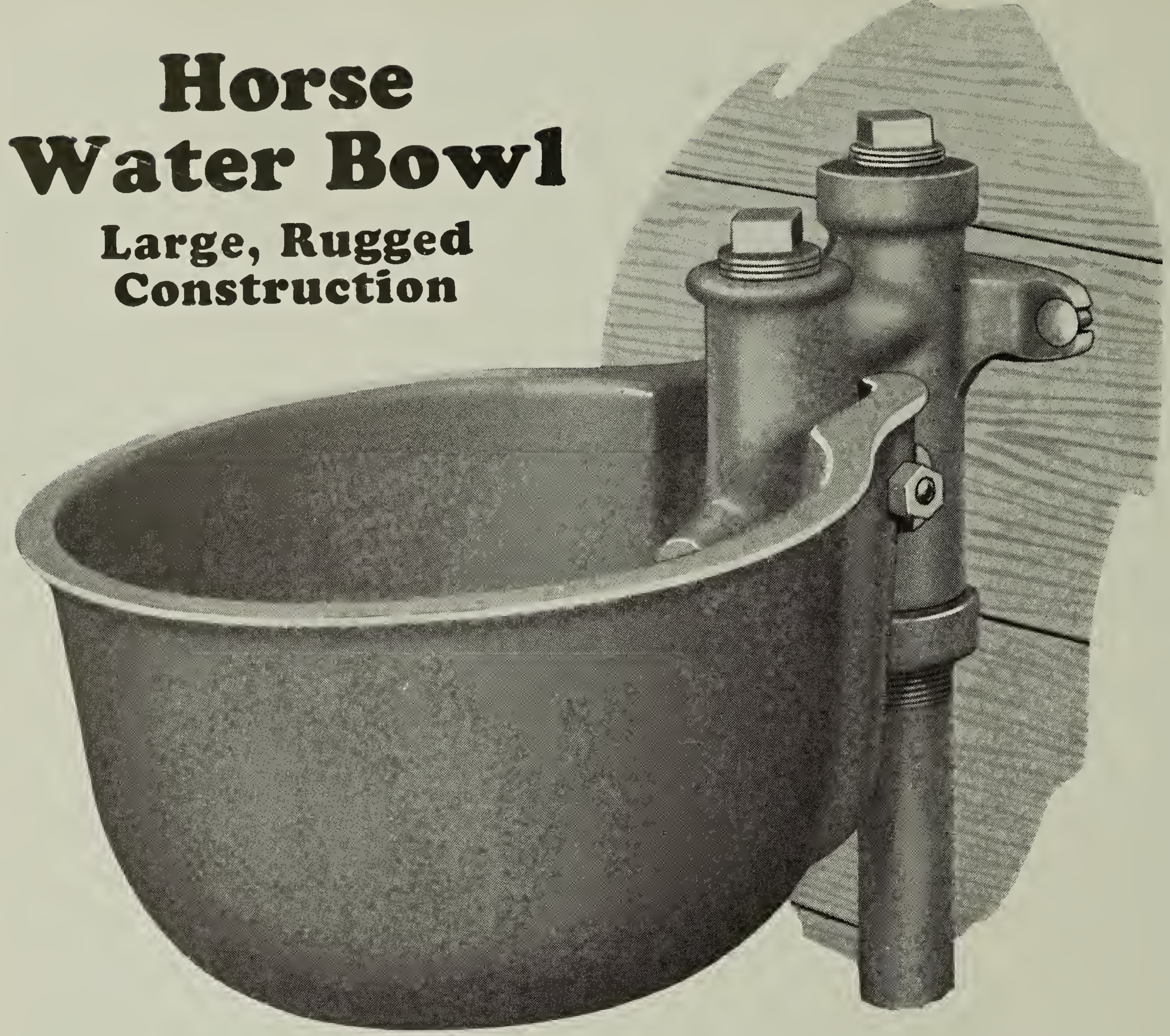
Strainer is tapped for a 1″ pipe.

Finish: ***Enamel or Galvanized.***

S133 — Water strainer. Weight, 2 lbs.

Horse Water Bowl

Large, Rugged Construction



Working horses need water when they want it, both day and night. After feeding on dry hay and roughage they become thirsty and fret unless water is available. Renders them less capable of hard work the following day.

The CLAY horse bowl is built large and of rugged construction. It will stand hard use.

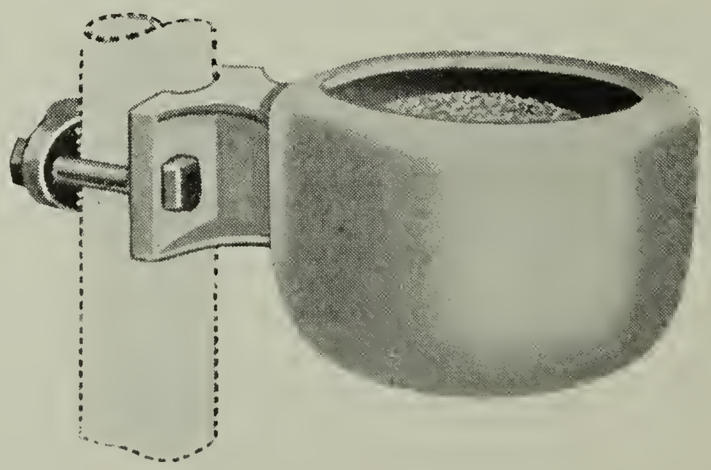
Nose opening — 9 3/8″; depth 6″. Projects out from wall 14½″. Paddle quickly lifts out to prevent horse from drinking, should this be desirable. Clamps on wood or steel posts. Connects with 1″ water pipe, either from top or bottom. Paddle malleable — valve mechanism same design as water bowls for cows as the CLAY DB-138.

Bowl heavy cast iron, removable for cleaning. Finish: Enamel or Galv.

No. HB138 — Horse Bowl. Weight, 24 pounds.

SALT CUPS

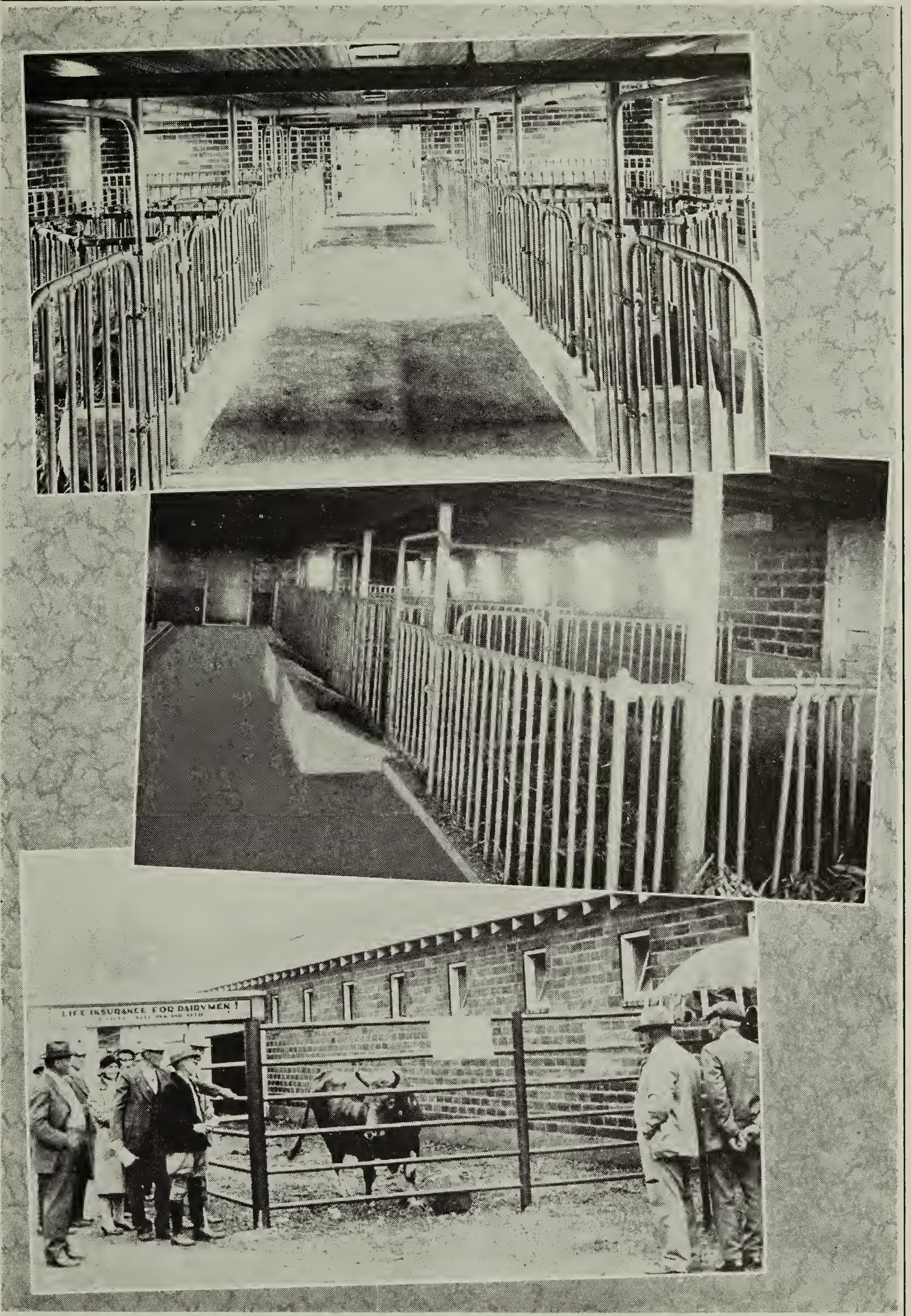
Porcelain Finish



Neat, small in size, not in the way yet holds ample supply of salt.

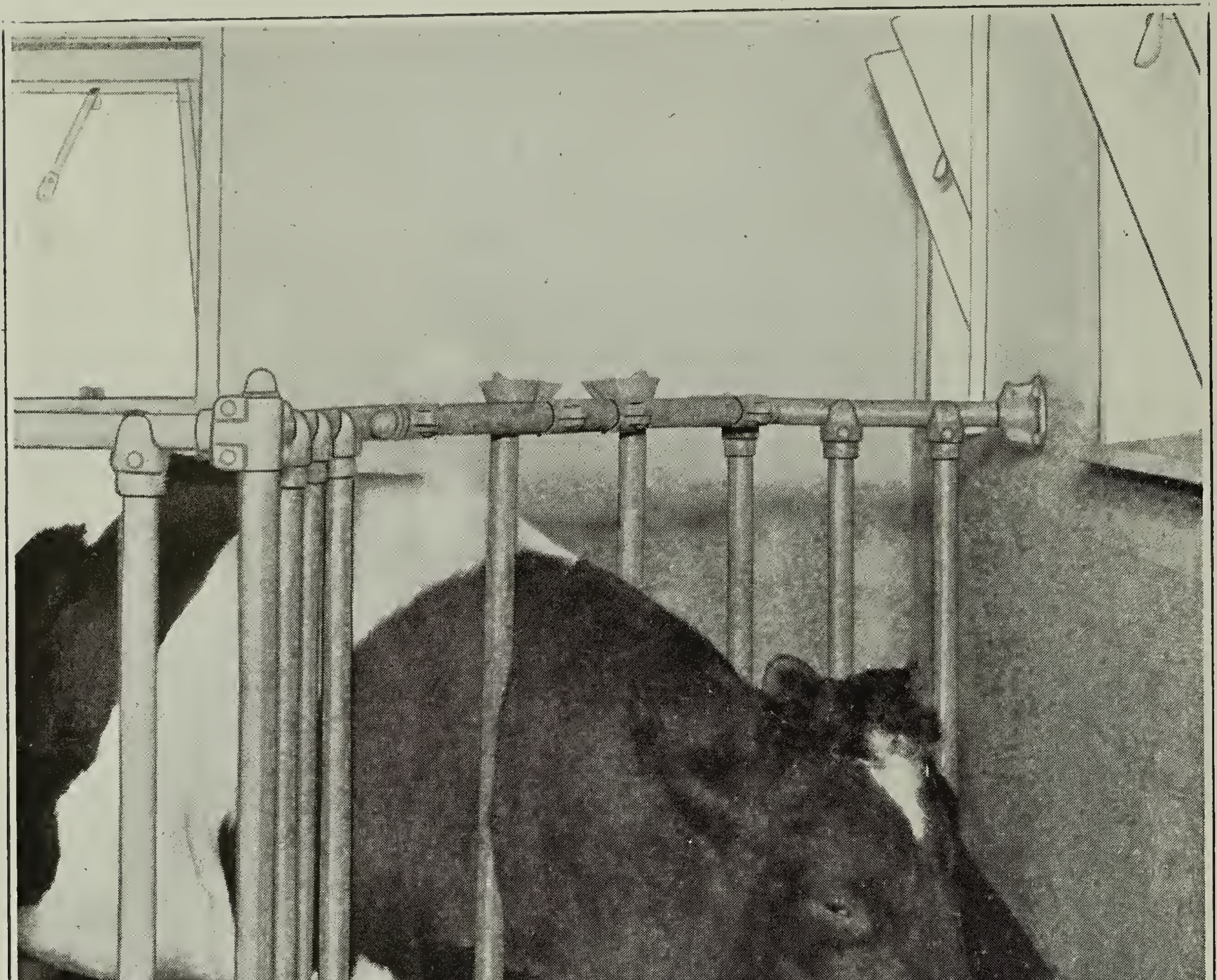
Design prevents cow from spilling salt while lapping. Inexpensive way to keep a constant supply of salt available for each cow.

No. SC1 — Salt Cup Porcelain Enamel. Weight, 4 2/3 pounds.



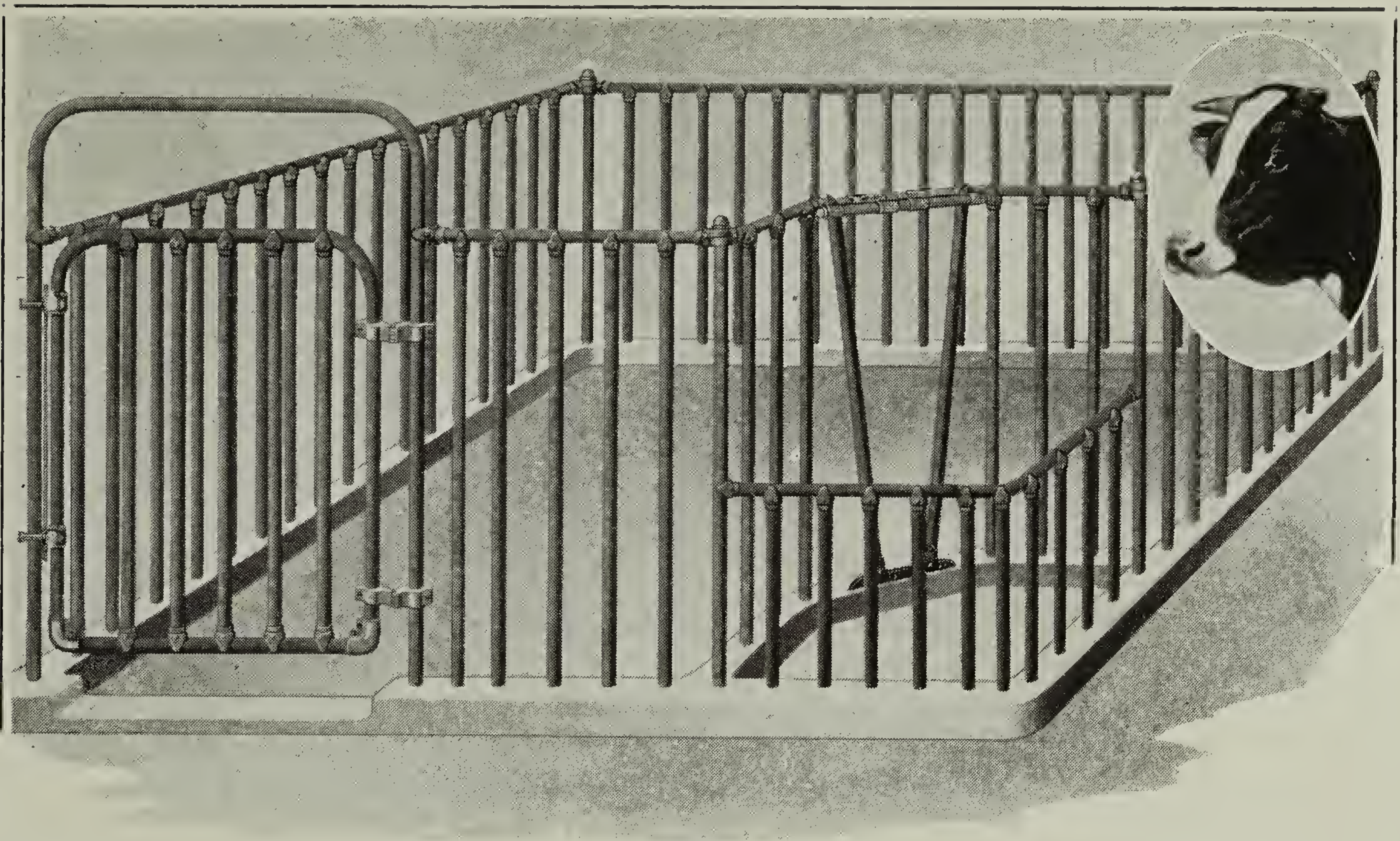
Top — Wayne County Dairy barn, Eloise, Mich.
Middle — Tegmier Dairy Barn, Westgate, Iowa.
Bottom — Cattle Congress Bull Paddock, Waterloo, Iowa.

A CLAY BULL PEN IS



INEXPENSIVE INSURANCE FOR YOUR ENTIRE FAMILY

Illustration shows typical bull pen corner manger with adjustable extra heavy two way stanchion.



Clay Bull Pen

DAIRY farmers realize that the bull is half the herd and should have the best of care. Results is that farmers now provide clean, comfortable, well lighted, well ventilated, safety steel pens that offer health and protection against accidents.

Consider the strong construction of the CLAY Steel pen, all tubes are deeply anchored in cement curb while at the top the spindles are mechanically locked into top rail casting (as illustrated on page 99).
Gate has double automatic lock. Slam it shut and it locks instantly.

The manger is of the built-in corner type with heavy stanchion construction. All fittings are strong, malleable with easy adjustment for width.

Columns and column clamps extra, see page 85. Gate posts to the ceiling can be supplied to pass a carrier track, same price.

P129 — Paneling per foot.

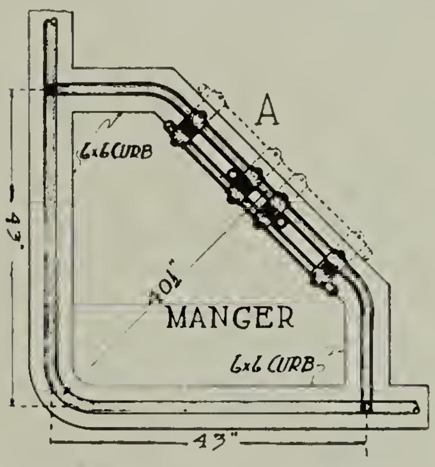
P130 — Extra for gate and arch.

P131 — Extra for corner manger and stanchion.

B106 — Swinging bull stanchion, see page 83.

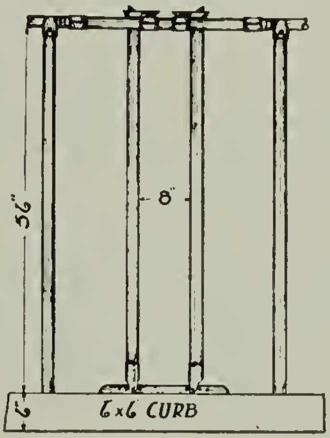
Specifications

TUBING — All top rail, corners, gate arches and gate frames, frame for stanchion proper, 1⅝ inches, outside diameter, steel tubing. Per ft. 2¼ pounds.



Cut shows the dimensions of the corner manger.

Dotted line (a) shows how stanchion can be set back 3½ inches from manger, allowing for unusually large animal.



Height from curb to underside of top rail 56". Permits use of swinging stanchion if desired.

SPINDLES — 1⅝ inches O. D., steel tubing, spaced about 4½ inches between spindles.

HEIGHT — 5 ft. 3 inches above floor.

SPINDLE LENGTH — 5 feet 2 inches.

GATE — 3 feet 6 inches, center to center of arch posts. Gate has 8 inch clearance from floor.

GATE ARCH HEIGHT — Clearance 6 feet 6 in.

CONNECTIONS — Spindle to top rail held securely by CLAY lock type clamps.

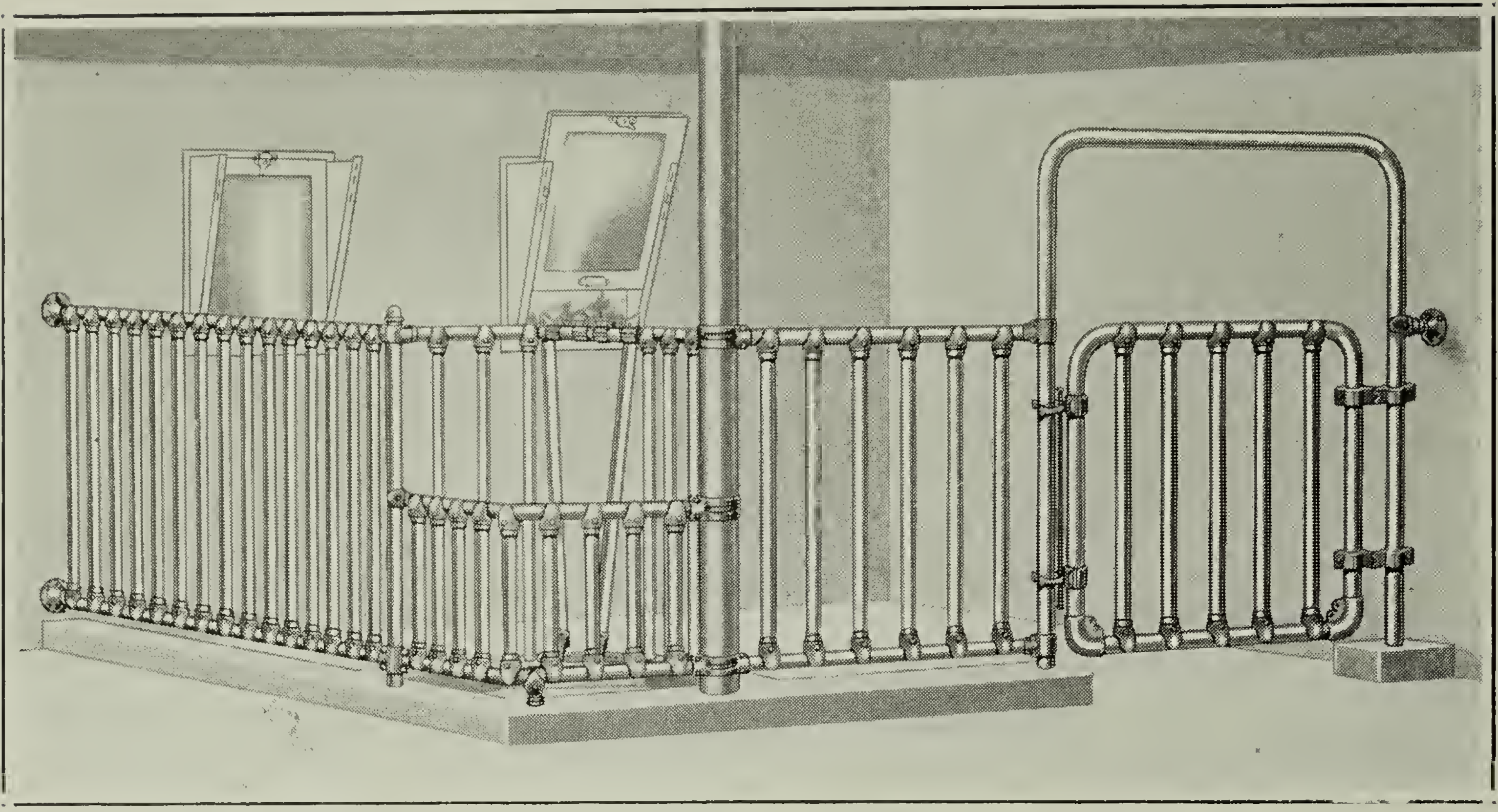
CURB SIZE — We recommend 6 inches wide, 6 inches high.

PEN SIZE — We recommend not less than 9 ft. by 10 ft. Average about 10 ft. by 12 ft.

CORNER MANGER — Size, from stanchion to corner, 40½ inches.

FINISH — Gray enamel or galvanized.

WEIGHTS — Bull pen per lineal foot about 21 lbs.; Standard Gate and Arch, about 120 lbs.; Stanchion and Corner Manger about 110 lbs.; Stanchion in the side Panel, about 50 lbs.



Clay Cow Pen

ILLUSTRATION shows top and bottom rail and clamp casting, (see insert page 99). Cow pens can also be supplied with squeeze type spindle connection (see page 99) or without bottom rail, spindles inserted in cement curb.

The dairy farmer who treats his cows kindly doesn't do it entirely as a matter of sentiment. It is business with him. He knows that comfortable surroundings play a big part in filling the milk pail.

The CLAY Cow or Maternity Pen is designed to give the cow that comfort and freedom so necessary at calving time. It is the cow's most critical time and surely deserves gentle kind attention away from all disturbance.

In case of sickness in the herd the CLAY Cow pen is indispensable. The sick animal can be kept apart from the other cows.

CLAY pens are easily erected being of panel construction. The corner manger with stanchion is generally preferred although a rigid stanchion can be installed in side panel.

P124 — Paneling per ft. as illustrated.
P125 — Extra for gate and arch.
P127 — Extra for calf stanchion.
P128 — Extra for corner manger and Stanchion.

Footage for pens, figure overall measurement including manger and gate opening.

Bottom rail should be set 2½ inches above curb.

Columns and column clamps and wall flanges extra, see pages 85-86.

Gate posts to the ceiling to pass a carrier thru the arch can be supplied at the same price.

SPECIFICATIONS

TUBING — All rail, posts, gate arch and gate frame, 1⅝ inch outside diameter, steel tubing, 2¼ lbs. per ft.

SPINDLES — $1\frac{1}{16}$ inch outside diameter steel tubing, 1⅛ lbs. per ft. spaced about 4 inches between spindles.

LENGTH OF SPINDLES, when no bottom rail is used, 4 feet 4 inches.

HEIGHT — 4 feet 6 inches from the floor.

GATE — 3 feet 6 inches center to center of arch post. Has 8½ inch clearance from the floor.

GATE ARCH HEIGHT — 6′ 6″ clearance.

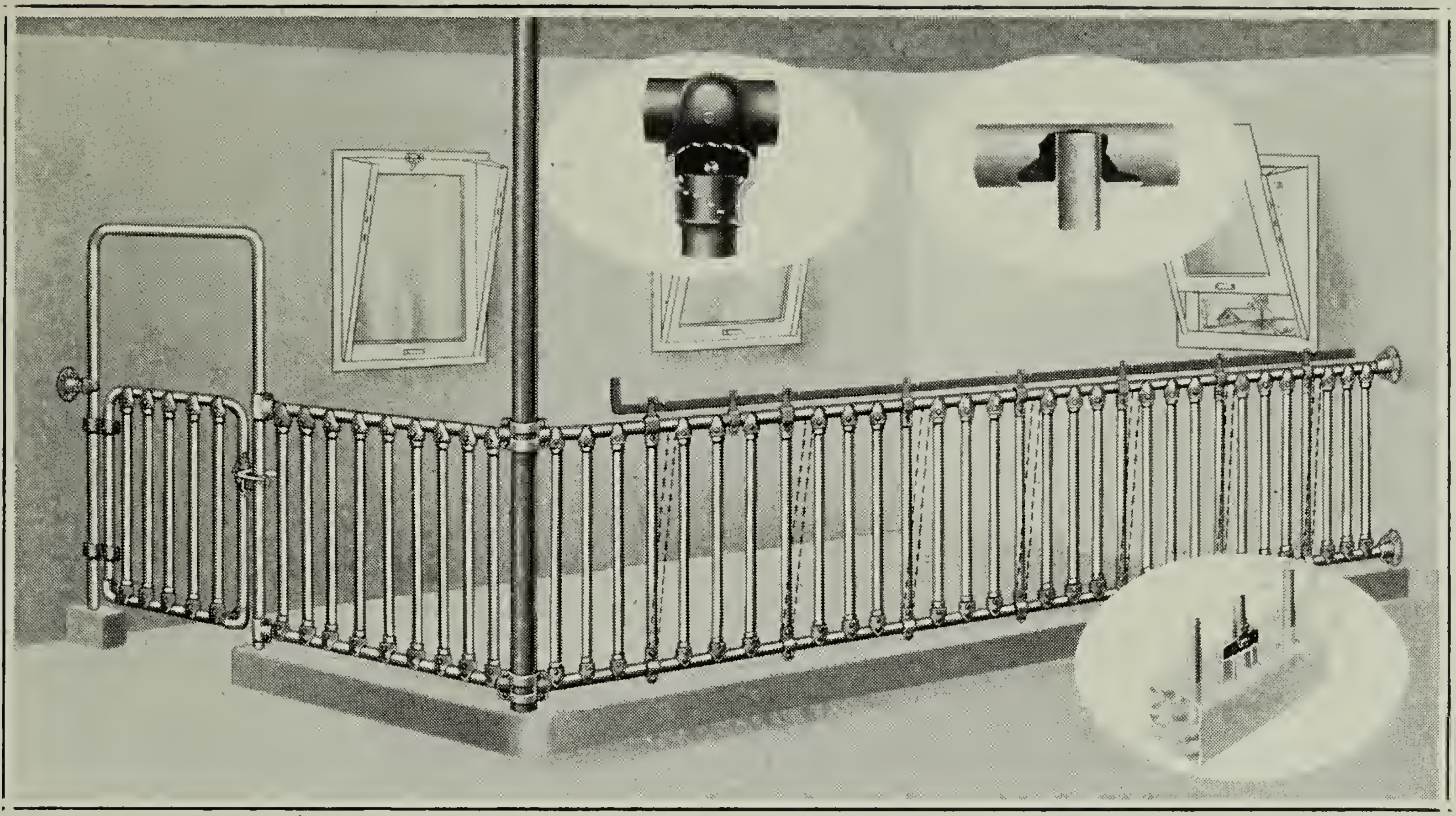
STANCHIONS — For cow, the same as furnished in the bull pen, either in the side panel or with corner manger. Also Calf Stanchion the same as furnished in the Calf Pen.

CURB SIZE — We recommend 6 inches wide, 6 inches high.

MANGER — See tilting manger page 102.

WEIGHTS — Cow Pen, per lineal foot, about 16 lbs.; Cow Stanchion and Corner Manger, about 85 lbs.

FINISH — *Galvanized or Grey Enamel.*



Clay Calf Pen

GIVE your calves a good start in life. Good care and good quarters during the early months largely determines their future value.

So often they are kept in wooden pens that shut out air circulation and in many cases they are in the darkest place in the barn. Is it any wonder calves do not grow and thrive as they should?

CLAY Pens are clean and are easily kept clean. The smooth, steel panels offer no harboring place for disease germs. No filth can collect on them. They do not shut out nature's best disinfectant — direct sunlight.

The stanchions are built into the panel. They are adjustable and can be made wider as calves grow. By a simple device all the stanchions can be opened and closed as one unit. Any one stanchion can be opened independently of others.

P121 — Paneling. As illustrated.
P122 — Extra for gate and arch.
P123 — Extra for each calf stanchion.

Columns and column clamps extra, see pages 85-86.
Gate posts to ceiling with caps can be supplied in place of arch.
Footage for pens figure overall measuring including gate opening.

SPECIFICATIONS

TUBING — All rail, posts, gate arch and gate frame, 1⅝ outside diameter steel tubing. Weight 2¼ lbs. per ft.

SPINDLES — 1$\frac{1}{16}$ inch outside diameter steel tubing, spaced about 4 inches between spindles. Wt. 1⅛ lbs. per ft.

HEIGHT — 3 feet 8 inches from the floor with 6 inch curb.

GATE — 3 feet 6 inches center to center of arch post. Has 8 inch clearance from the floor.

GATE ARCH HEIGHT — 6 feet 6 inches clearance.

STANCHIONS in side panel, multiple operated, or independently operated, minimum space, 22 inches center to center unless anti sucking guards are used.

CURB SIZE — We recommend 5 inches wide, 6 inches high.

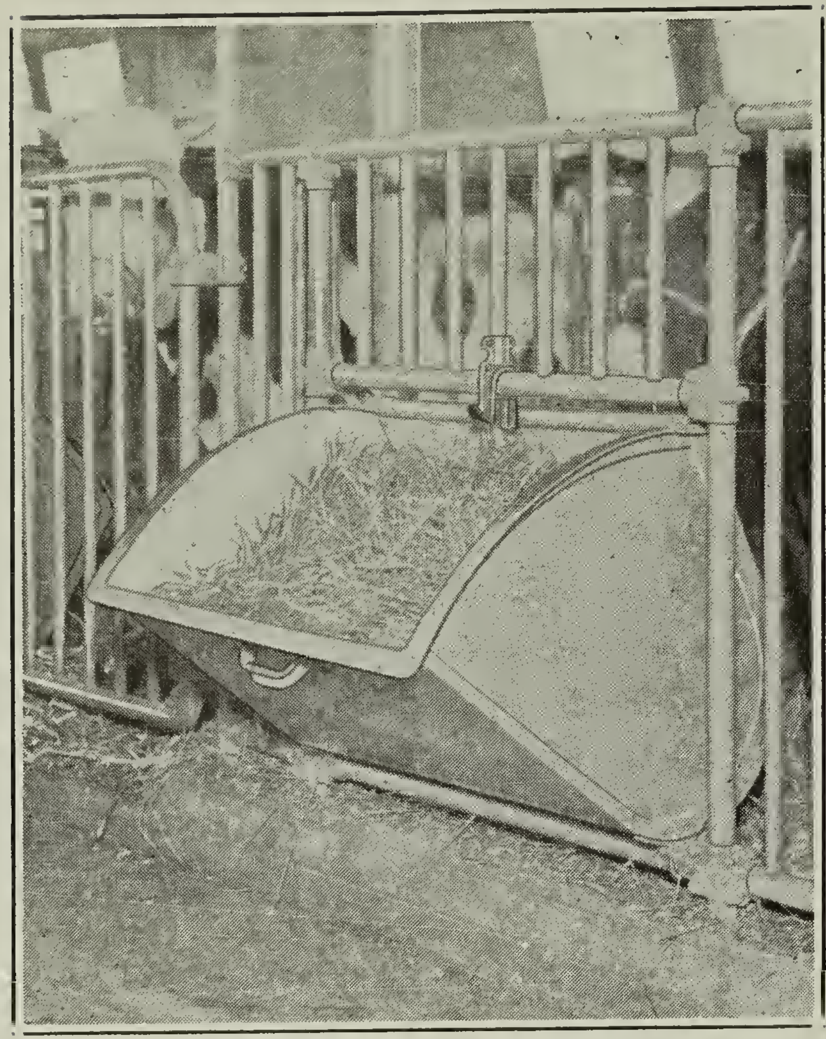
WEIGHTS — Calf Pen per lineal foot, about 15 lbs.

FINISH — *Galvanized or Grey Enamel.*

INTERLOCKING SPINDLE CLAMP Though small, the illustration shows the casting cut away where lugs on the pipe engage a recess and lock the pipe inside the clamp.

SQUEEZE SPINDLES — The right upper insert picture shows how spindle pipe are inserted in the top and bottom rail and squeezed tight in place. Does not catch dust or dirt, more sanitary. Spindles are forced under very heavy pressure into holes slightly smaller than the pipe spindles themselves, thus making a rigid, solid joint. Costs less than castings and makes a very smooth, easily cleaned pen panel.

CURB CONSTRUCTION— At considerable saving in cost, we can supply spindles to set in cement curb as shown in lower insert picture.



TILTING MANGER

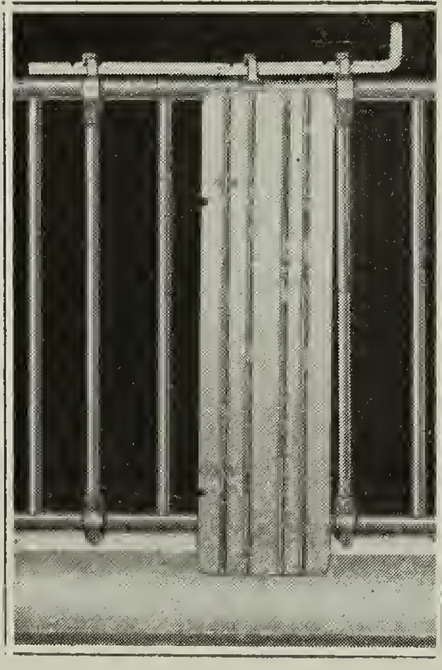
AN ideal method of feeding ensilage fodder, or grain. Tilted out as illustrated, the manger permits easy filling, and when tilted inside the pen ample feeding room for the cow or bull. It is also a safeguard when the herd sire happens to be a bit cantankerous.

TPM132—Tilting manger. Wt.100 lbs. Includes all necessary fittings to hinge on lower 1⅝″ rail and latch to 1⅝″ header rail immediately above the manger. Can be installed in calf, cow or bull pen paneling.

SPECIFICATIONS: 18 gauge copper bearing galvanized steel. Welded to form formed angle 1″x 1″x ⅛″ at the ends and tubular finish at the front and back top edges. Size 3 ft. long, 2 ft. 4 in. wide, 2 ft. 4 in. deep. Tilts in 24 inches and outside the same. Also it will release and tilt to the floor for washing. Locks in open or closed position.

Finish Grey Enamel or Galvanized.

ANTI-SUCKING GUARDS



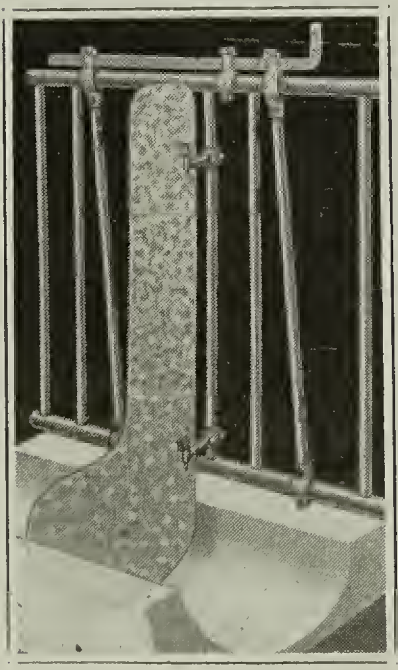
There is no surer way to prevent and stop the ear sucking habit among calves than to stanchion them and use anti-sucking guards shown at the left. This effective guard stops any sucking and the habit is soon broken.

ASG1 — Anti-Sucking Guard. Weight, 10 pounds.

SPECIFICATIONS: 16 gauge copper bearing galvanized steel heavily corrugated to stiffen it. Castings are malleable. Guard hinges to lay flat with front of the paneling as illustrated. Locks when in extended position. Size 11″x 38″.

Finish: Grey Enamel or Galvanized

ANTI-SUCKING GUARD AND MANGER DIVISION



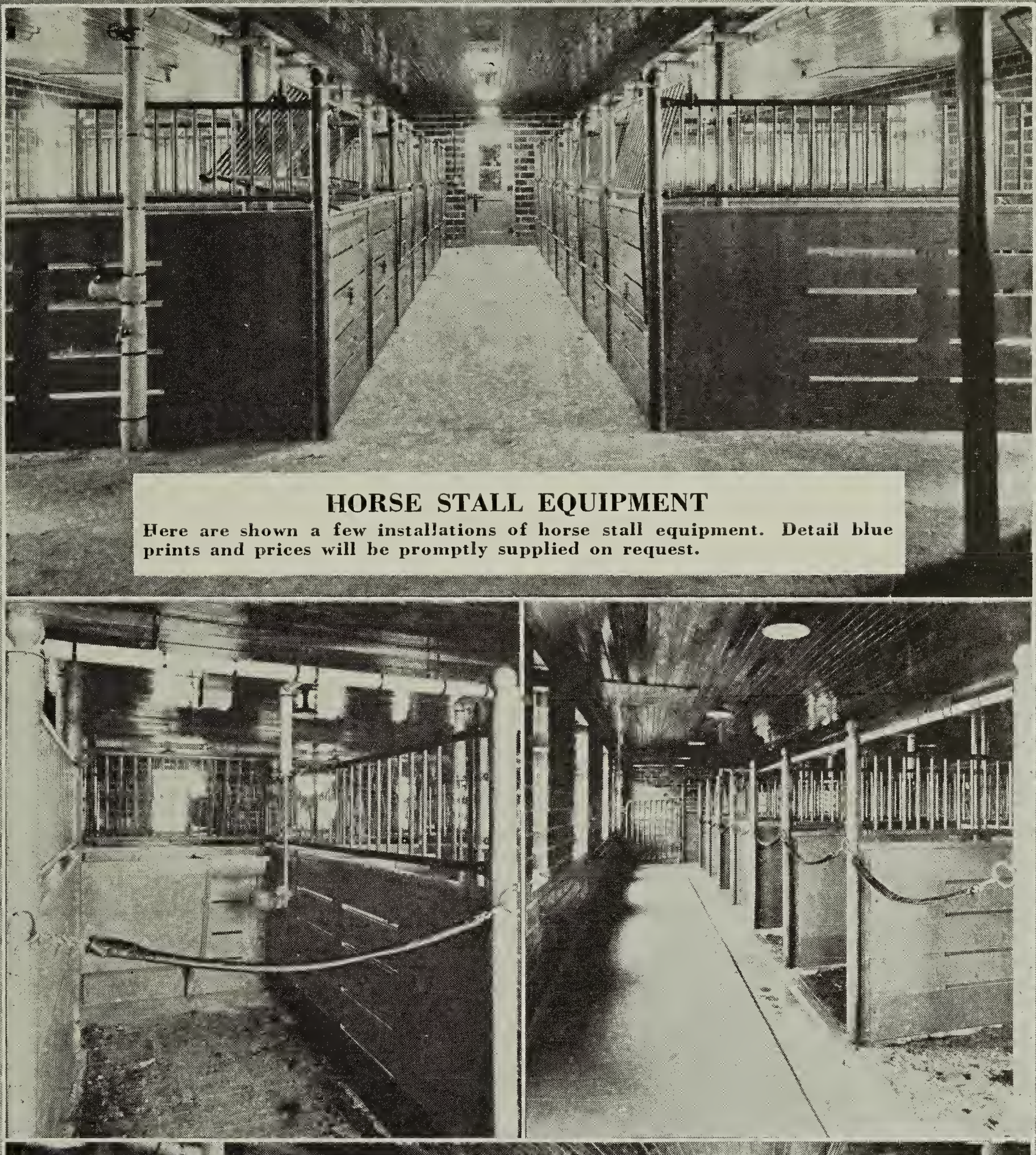
When separate calf feeding is desired, this makes an ideal combination. Use one less guard per row than the number of stanchions. It is also hinged to swing flat as in illustration of **ASG1.**

ASGM2—Combination Guard and Division. Weight. 17 pounds.

SPECIFICATIONS: 14 gauge copper bearing galvanized steel. 11 inches wide at the top, 20 inches wide at the bottom, 44 inches high. Castings, best grade of malleable.

Finish: Grey Enamel or Galvanized

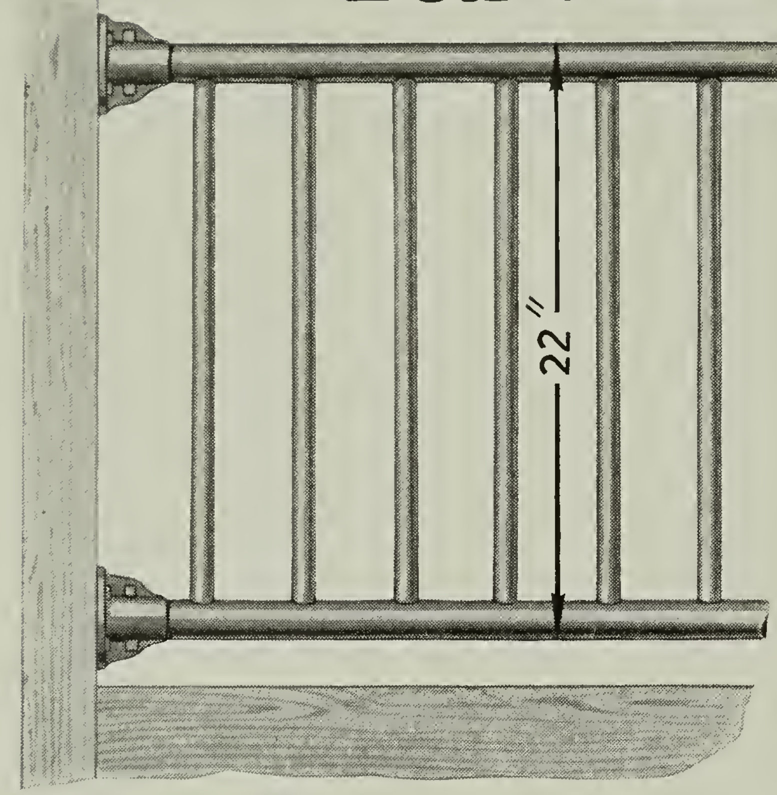
ASGMT — Template to make above manger to fit this division.



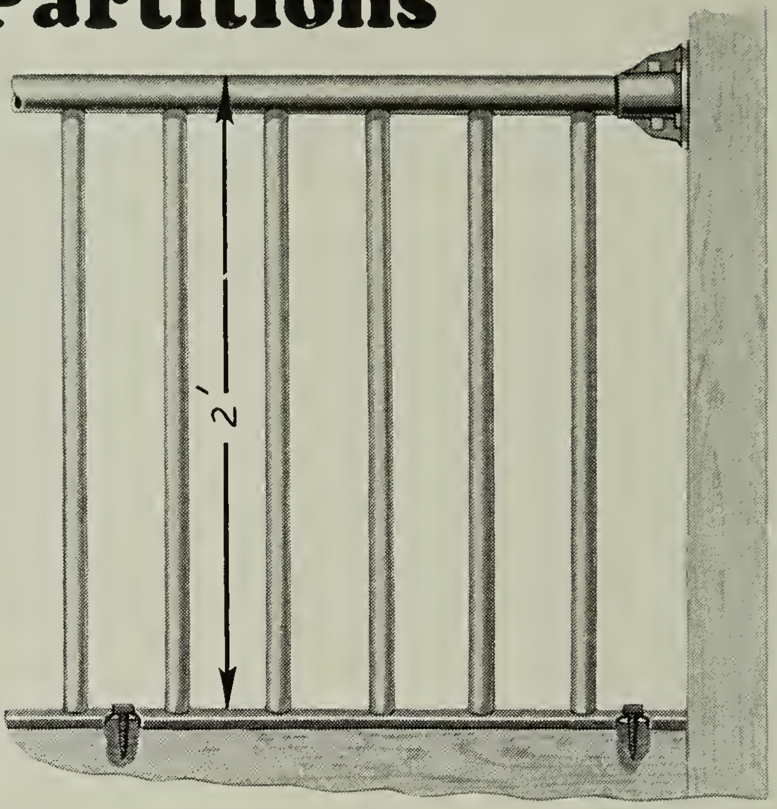
HORSE STALL EQUIPMENT

Here are shown a few installations of horse stall equipment. Detail blue prints and prices will be promptly supplied on request.

Box Stall Partitions



HG183 All Pipe Guard



HG184 Pipe and Channel Guard

The above illustration pictures two rugged as well as fine appearing grille guards for box horse stalls. Stall built with solid walls high enough to separate the animals and to protect those who pass in the feed alley, are very stuffy and close. Horses are usually much quieter and less liable to fret when they can see what is going on about them.

The upper left picture illustrates the top and bottom pipe rail with pipe spindles, while the upper right illustrates a similar construction, except the bottom is a channel that fits over the top of the 2″ plank partition and is secured there by ⅜″x 3″ lag screws.

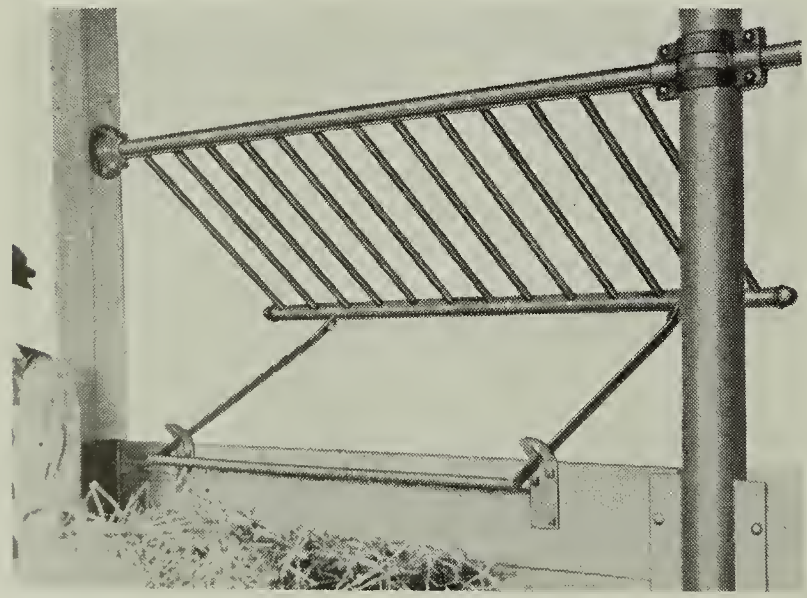
When ordering, give the clear length between the wood or steel posts and deduct about ½″ to ¾″ to permit of easy installation.

Either design can be supplied with solid rod spindles, ½″, ⅝″ or ¾″. In both of the above styles, the pipe spindles are inserted in the pipe and forced under heavy pressure to a snug tight fit. We recommend this squeeze type construction in preference to malleable clamp fittings.

SPECIFICATIONS

Pipe rail 1⅝″ O. D. brazed seam high carbon steel, 1.8 lbs. per foot. Spindles ⅞″ O. D. high carbon steel brazed seam pipe, ½ lb. per foot. Spacing, 5″ center to center. Weight, 6 lbs. per lineal foot. Finish, galvanized or grey enamel.

Top pipe rail 1⅝″ O. D. brazed seam high carbon steel, 1.8 lbs. per foot. Spindles ⅞″ O. D. pipe high carbon steel, brazed seam, ½ lb. per foot. Spacing, 5″ center to center. Weight, 5½ lbs. per foot. Finish, *Galvanized or Grey Enamel.*



TILTING FEED PANEL

Here is illustrated an ideal front feeding panel that reduces the labor and makes easier the feeding of both hay and grain, protecting both the feeder and the horse. It will tilt open 18″, and when closed the operating handle hangs down flat against the front of the stall —very easy to operate and locks whether in the open or the closed position.

SPECIFICATIONS

Construction and pipe sizes are exactly the same as HG183 above.

HEIGHT: 2 feet.

LENGTH: Standard for the top pipe rail, 4′ 6½″, play in the end castings will permit this length to fit between 6x6 wood posts or 4″ steel columns when they are set 5′ Center to Center. The bottom pipe rail is 4′ 3″.

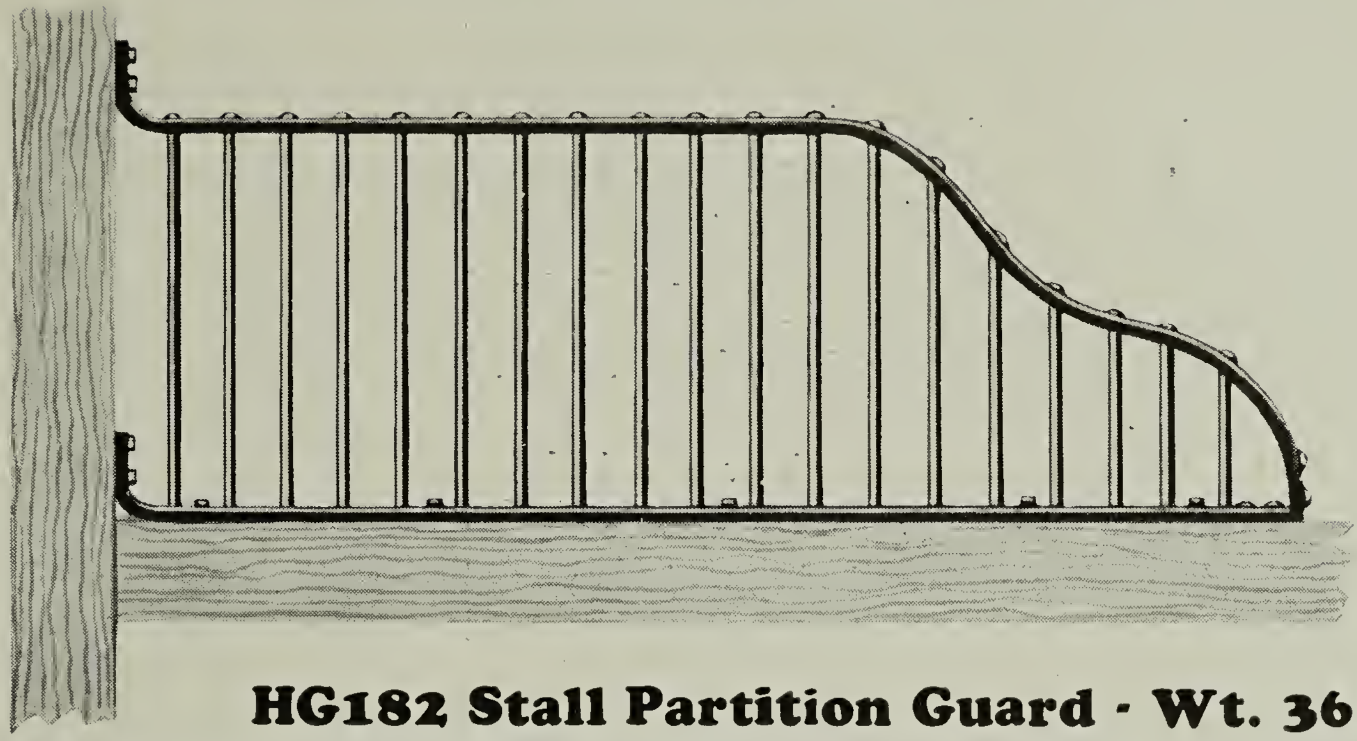
Special lengths in lots of four or more at no extra charge.

The handle is ⅞″ O. D. 3 ft. pipe, the same as in spindles. The levers are ¼″x 1″ flat, 2′ long. Finish, *Galvanized or Grey Enamel.*

HG185 — Tilting feed panel, wt. 35 lbs.

Flanges for wood posts or clamps to connect pipe rails to steel columns must be ordered extra as needed. See pages 72 and 86.

Horse Stall Guards



HG182 Stall Partition Guard - Wt. 36 lbs.

Steel grille guards put in horse stalls are always advisable. They allow for transmission of air, better light, greater sanitation. The guard illustrated is strong and dependable construction, and costs a very small amount. Heavy tubular guards in style similar to the illustration on page 102 can be supplied in this O-G shape as illustrated above on special order.

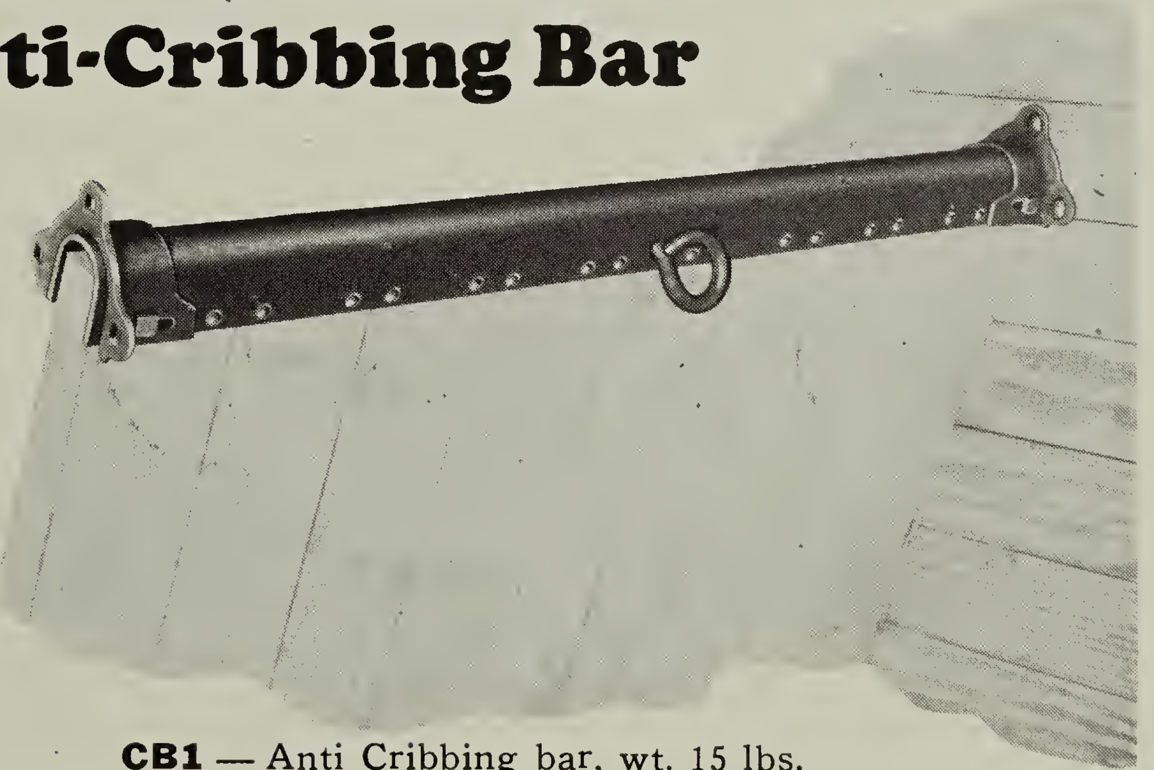
The ½″ rods have a shoulder at each end and then pass through a hole in the channel and riveted top and bottom. The bottom channel fits over the top edge of a 2″ plank in the partition, and is secured in place by ⅜″x 3″ lag screws. This same guard can be used with steel columns, but requires holes drilled through the columns for the bolts to attach the guard.

SPECIFICATIONS: Size, 2′ high, 5′ long. ½″ stiff high carbon steel spindles spaced 5″ on centers. Finish, *Galvanized or Baked Grey Enamel.*

Anti-Cribbing Bar

Heavy structural member that prevents broken mangers and also stops cribbing.

Special lengths can be supplied up to 5′ 6″ at no extra charge.



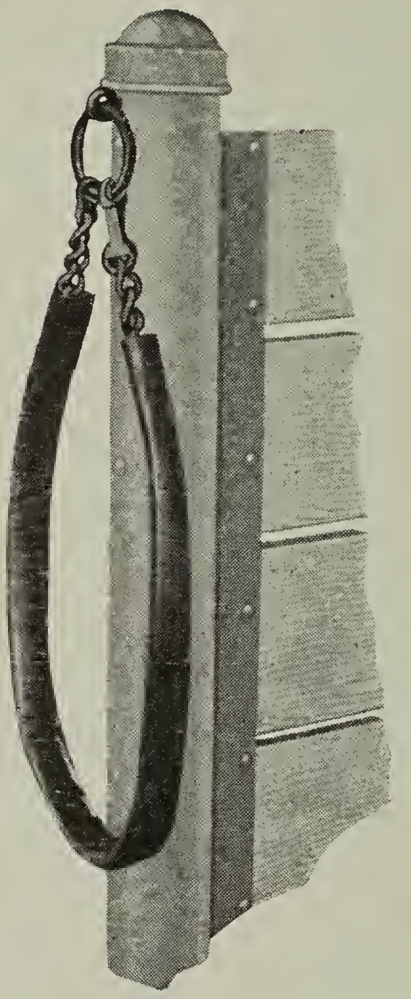
CB1 — Anti Cribbing bar, wt. 15 lbs.

So many mangers are broken by heavy horses, or the top is eaten away, that we have designed this extra heavy cribbing bar with malleable end castings which act both as the main structural member of the manger as well as to prevent cribbing. The channel is 1⅞″ inside, which is just right to set in the top ends of the plank of the manger and secure these ends by wood screws through holes which we provide every 2½″. A heavy eye bolt serves as a halter tie.

SPECIFICATIONS: Standard size 4′ 10″ long, suitable for stalls with partitions 5′ center to center. Special lengths can be supplied to order. End castings permit 1½″ adjustment in length to fit slight variations in stall width. Channel; special high carbon steel outside dimensions 1⅞″ x 2 1/32″ x ⅛″. Weight per foot, 2¼ lbs. Halter tie, different than illustration is mounted at one side with a loose malleable tie ring. Finish — *Galvanized or Baked Enamel.*

Leather Covered Rear Straps

For Horse Stalls



There is no better or more convenient appurtenance for the single horse stall than the rear strap, leather covered. It is illustrated here hung on 4″ rear stall posts out of the way, but ready to close up the back of the stall by convenient snap hook.

Really serious accidents would have been averted if these chains were in use.

In setting up, we caution you to be careful about the height, and not have too much sag in the chain.

SPECIFICATIONS: The chain is ¼″ welded twisted links, and with a cold shut link on one end and a very heavy snap hook on the opposite end.

The chain is covered with heavy harness leather to within 6″ of each end. Regularly supplied for stalls 5′ wide. Special lengths made to order.

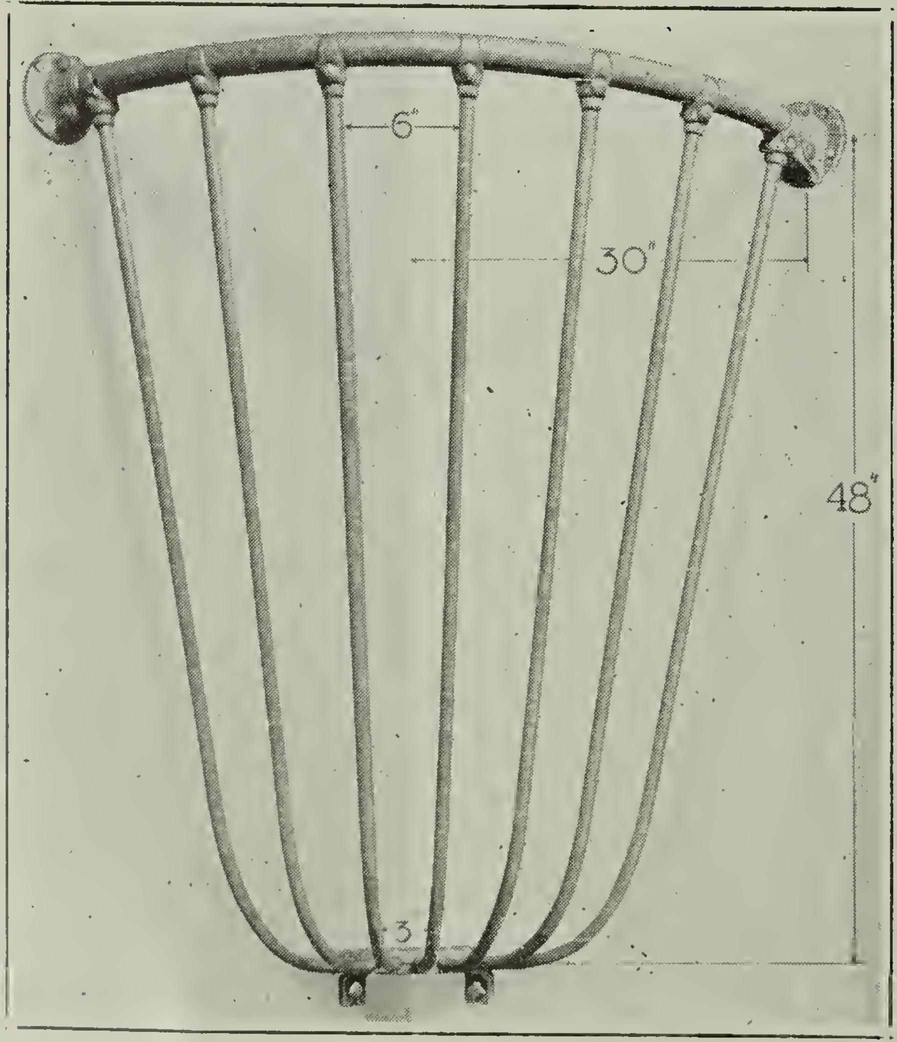
When ordering, specify whether for wood posts or 4″ steel posts.

LCRS1 — Weight 5½ lbs.

Corner Rack For Horse Stalls

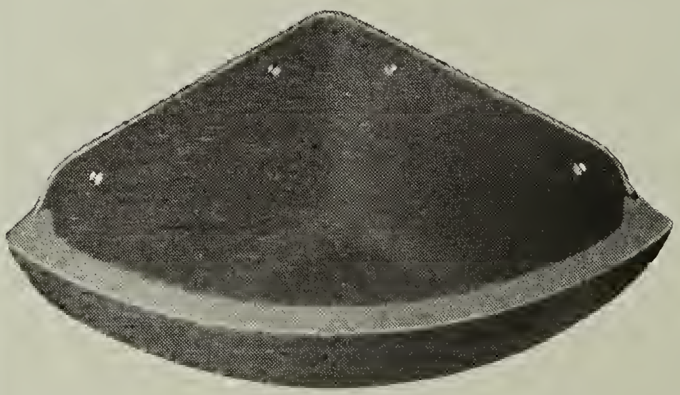
This very heavy rack is ideal for horse stalls.

Top rail 1⅝″ O. D. pipe. Spindles ⅞″ O. D. pipe, height 48″. Radius at top 30″. Spacings of spindles 6″ top — 4½″ average. Each spindle is clamped by a heavy casting at the bottom. Finish — *Galvanized or Baked Grey Enamel.*



HR183 — Corner Feed Rack, weight, 40 lbs.

Horse Corner Feed Box



Cast iron — Made in Two Sizes:

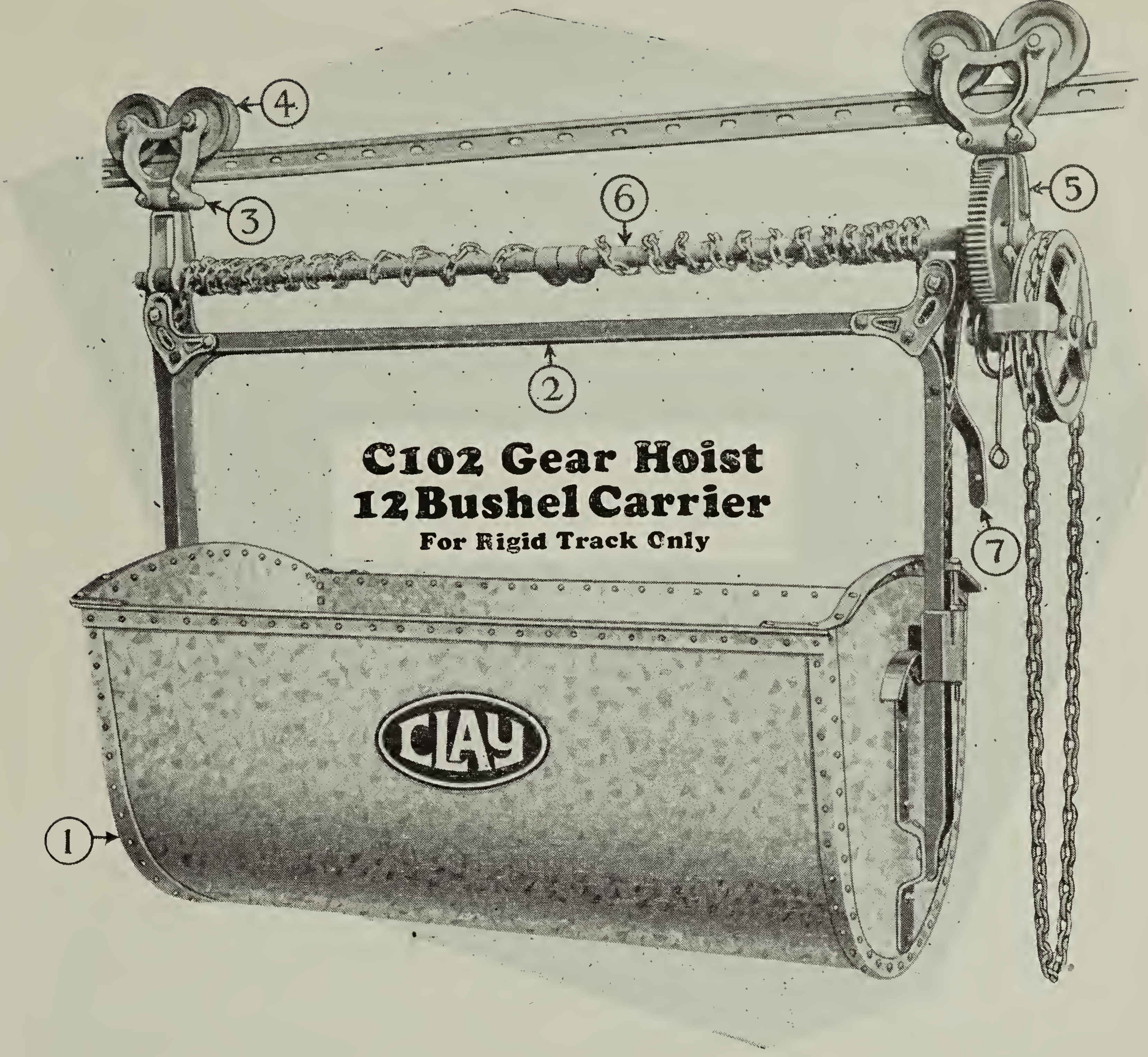
Rounded front edge has inside flange to prevent horse throwing out feed. Painted finish only.

We do not advise galvanized finish for feed boxes because of the toxic effect of zinc.

F. O. B. Galena, Illinois.

FB180 — 15″x 15″. Wt., 27 lbs.

FB181 — 17″x 17″. Wt., 35 lbs.



C102 Gear Hoist
12 Bushel Carrier
For Rigid Track Only

This Carrier With Rigid Track in the Barn and Boom Outside or Rigid Track and Arches Provides the Very Best Installation Which We Advise

1 — TUB: Sides and bottom are one piece 18 gauge galvanized copper bearing sheet steel, closely riveted to angle steel frame with large flat head rivets. Ends are 16 gauge. Size 48″ long, 24″ wide, 24″ deep inside. Capacity, 12 bushels. Round self cleaning bottom. Tub raises to 3′ 9″ below track and descends to 6′ 6″ below track.

2 — BAIL: 2″x 1″x $\frac{3}{16}$″ channel steel, attached by heavy pivot and heavy latch engagement at each end of tub.

3 — CASTINGS: All these subjected to unusual strain are high grade malleable.

4 — TROLLEY, 4 WHEELS: 4½″ diameter, roller bearing, machine grooved to fit track.

5 — GEARED HOIST: Permits easy lift of huge load. Clutch and brake are combined in a simple cam casting inside large gear.

6 — SHAFT: 1¼″ solid cold rolled steel which turns in machined bearings.

7 — TRIP LEVER: At opposite end from Fig. 7 does not show above but releases catch at both ends of tub by means of small connecting chain.

FINISH: Galvanized tub, and other parts grey enamel. Can be supplied all Galvanized finish on special order.

SPECIAL: Installations requiring greater height of lift up to 14′ ceiling, that is 10′ lift, can be supplied.

C102 — Geared Hoist Carrier, shipping weight, 200 lbs.

Clay Twelve Bushel Geared Hoist Carrier

For Rigid Track Only

THE magnificent carrier shown on opposite page will save you more hard work and drudgery, it will noticeably lighten your daily chores, more than any other item of equipment you can install.

Lowered to the floor for knee high shoveling, easily raised by means of the gear hoist, smooth roller bearing trolley wheels to carry the load to the dump, a rope attached to trip and unload it, the same rope used to pull the carrier back, all told, makes a combination of time and labor saving that you should have in your barn. Special attention is called to figure 5, page 107. The surprising simplicity of this cam casting which locks the carrier when raised, releases the carrier for self lowering by its own weight, and breaks the descent, is not equaled in any other raising and lowering carrier construction.

It's just so simple, so easily handled, so substantial, that it can't get out of order and you have to see it to appreciate it.

Cut out this task for 75 cents per month

Stop the Wheel Barrow Drudgery

This back straining method of handling manure is an abuse of yourself that you should stop. Balancing a wheel barrow with a heavy load on a slippery plank with disagreeable accidents that occur, has caused more boys to leave the farm and more hired men to throw up their jobs than any other single thing.

SEVENTY-FIVE CENTS PER MONTH PAYS THE INTEREST AND DEPRECIATION ON AN AVERAGE CARRIER INSTALLATION.

Where can you hire any cheaper help?

Clay Swill Carriers

Specifications

CAPACITY: 60 gallons.

DIAMETER OF TANK: 24 inches.

DEPTH OF TANK: 30 inches.

Tank, 18 gauge galvanized copper bearing steel, heavily riveted — all seams welded and soldered.

Band at the top is 2″x ¼″ flat steel — at bottom ¼″x 1¼″. Bail ⅝″ round.

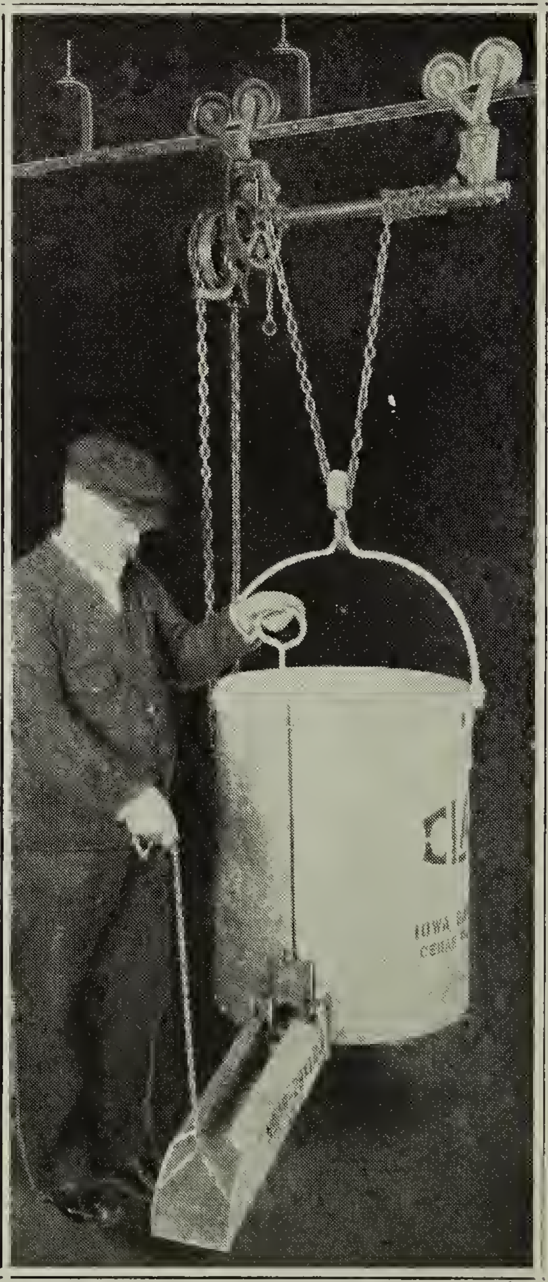
The valve is brass, carefully machined to insure against leakage — 2¾ inch opening flush with bottom of tank. Will handle thick slop.

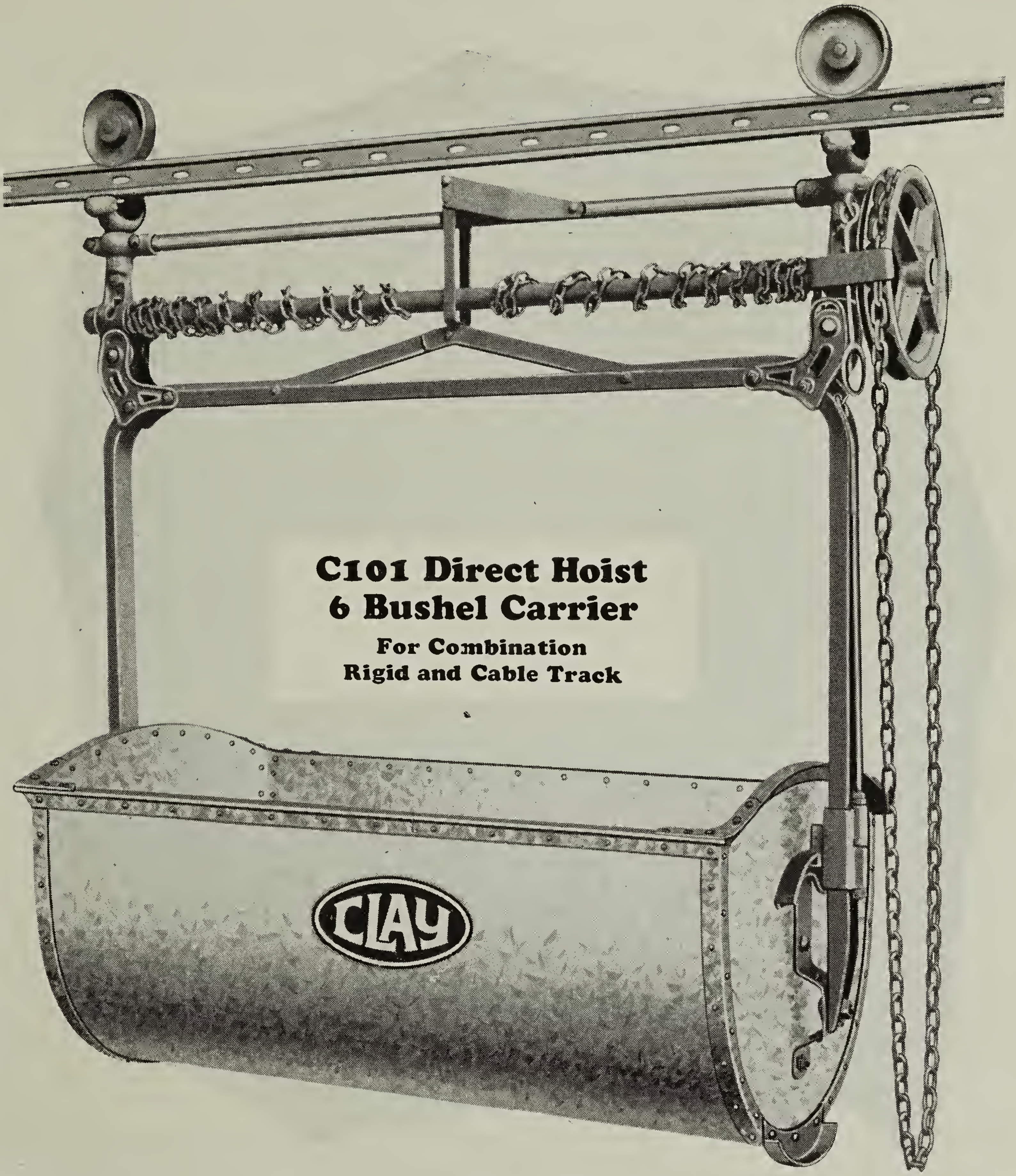
Delivery spout folds up against side of tank.

Swivel hook on pulley enables turning of tank clear around.

Raised and lowered by a geared hoist same as on 102 carrier.

C104 — Swill carrier, shipping weight, 200 pounds.





C101 Direct Hoist 6 Bushel Carrier

For Combination Rigid and Cable Track

TUB: Sides and bottom are one piece 20 gauge galvanized copper bearing sheet steel, end 18 gauge closely riveted to angle steel frame with large flat head rivets.

SIZE: 41″ long, 23″ wide, 19″ deep, capacity 6 bushels. Tub raises to 3′ 6″ below track and descends to 6′ 6″ below track.

BAIL: 2″x 1″x $\frac{3}{16}$″ channel, attached by heavy pivot and latch at each end of tub.

CASTINGS: All castings subject to any shock or strain are high grade malleable.

HOIST: Chain sprocket wheels directly connected to chain shaft which is $1\frac{1}{4}$″ cold rolled steel. Clutch and brake are combined in one simple very heavy casting inside the sprocket.

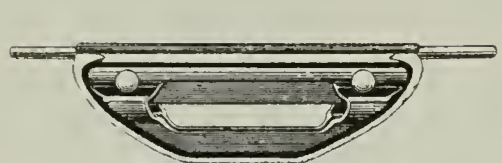
TROLLEY: Two wheels, $4\frac{1}{2}$″ diameter, roller bearing, machine grooved to fit both rigid and cable track, either 4-0 or 6-0.

SAFETY GUARD: Below each trolley wheel is a guard to prevent trolley from jumping track. When carrier approaches rigid track a finger on the terminal hanger tips this guard below the rigid track.

TRIP: Exceedingly simple and substantial — small cam on bottom of tub holds tripping device from rubbing trip on cable when carrier starts back to the barn.

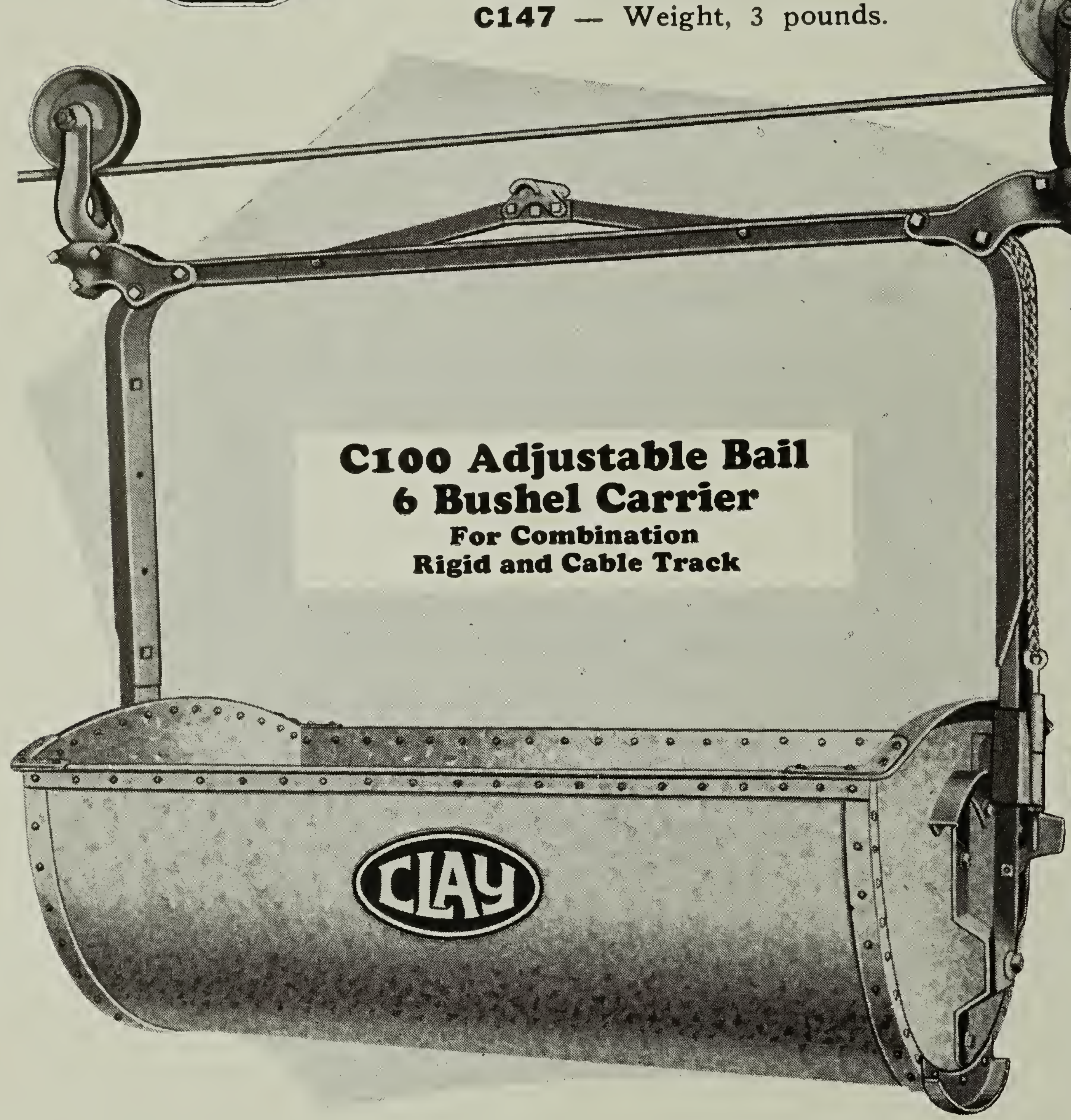
FINISH: Galvanized tub, and other parts grey enamel. Can be supplied all Galvanized finish on special order.

C101 — Direct hoist carrier. Shipping weight, 160 lbs.



Trip for C100 and C101 Carriers fit 6-0 or 4-0 Cable. When one carrier is used with two cables an extra trip is needed.

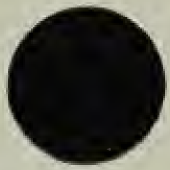
C147 — Weight, 3 pounds.



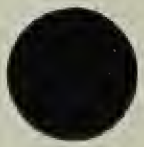
C100 Adjustable Bail 6 Bushel Carrier

For Combination Rigid and Cable Track

ACTUAL SIZE



C140- 6-0 Cable per 100 ft. 57 lbs.



C141- 4-0 Cable per 100 ft. 40 lbs.

TUB: Sides and bottom one piece 20 gauge galvanized copper bearing sheet steel, ends 18 gauge galvanized sheet steel, closely riveted to angle steel frame with large flat head rivets. Size 41″ long, 23″ wide, 19″ deep. Capacity, 6 bushels.

BAIL: 2″x 1″x $\frac{3}{16}$″ channel steel, attached by heavy pivot and latch at each end of tub. Bail legs are longer than No. 101 and permit some adjustment in height of tub from floor.

CASTINGS: All castings subject to any shock or strain are high grade malleable.

TROLLEY: Two wheels, 4½″ diameter, roller bearing, machine grooved to fit both rigid and cable tracks, either 4-0 or 6-0.

SAFETY GUARD: Below each trolley wheel is a guard to prevent trolley from jumping track. When carrier approaches rigid track a finger on the combination connection tips this guard below the rigid track.

TRIP: Exceedingly simple and substantial.

FINISH: Galvanized tub, and other parts grey enamel. Can be supplied all Galvanized on special order.

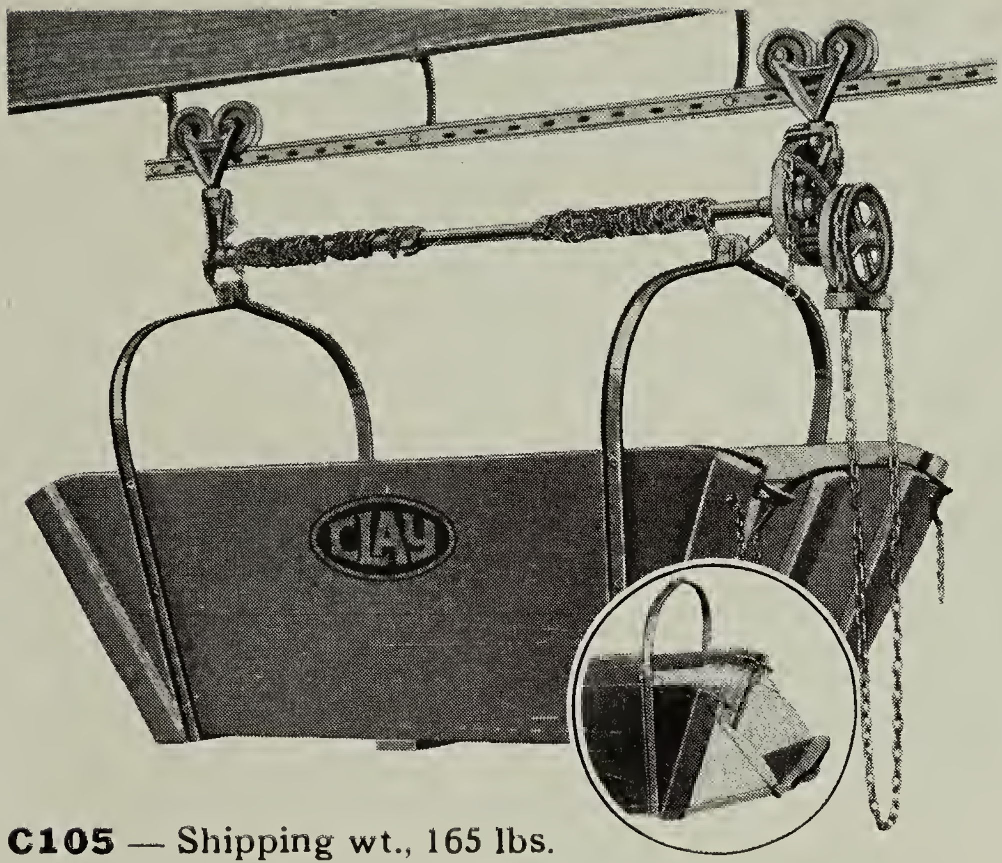
C100 — Adjustable bail carrier. Shipping weight, 106 pounds.

Clay Feed Carrier

With a bushel basket you carry only enough silage for one or two cows whereas the CLAY carrier hauls enough for 25 or more cows at one time. Think of the labor it will save.

The feed carrier track may be used independently or connected with the litter carrier track to meet any system of track arrangement.

Insert shows end of carrier box lowered for convenient feeding.



C105 — Shipping wt., 165 lbs.

Specifications

TUB — Durably constructed of 1 inch clear, selected lumber. Size, 66 in. long, 31 in. wide, 20 in. deep. Capacity, 16 bu., level full. Edges securely ironbound all around. Both ends sloping; one end drops for convenient shoveling. (See insert.)

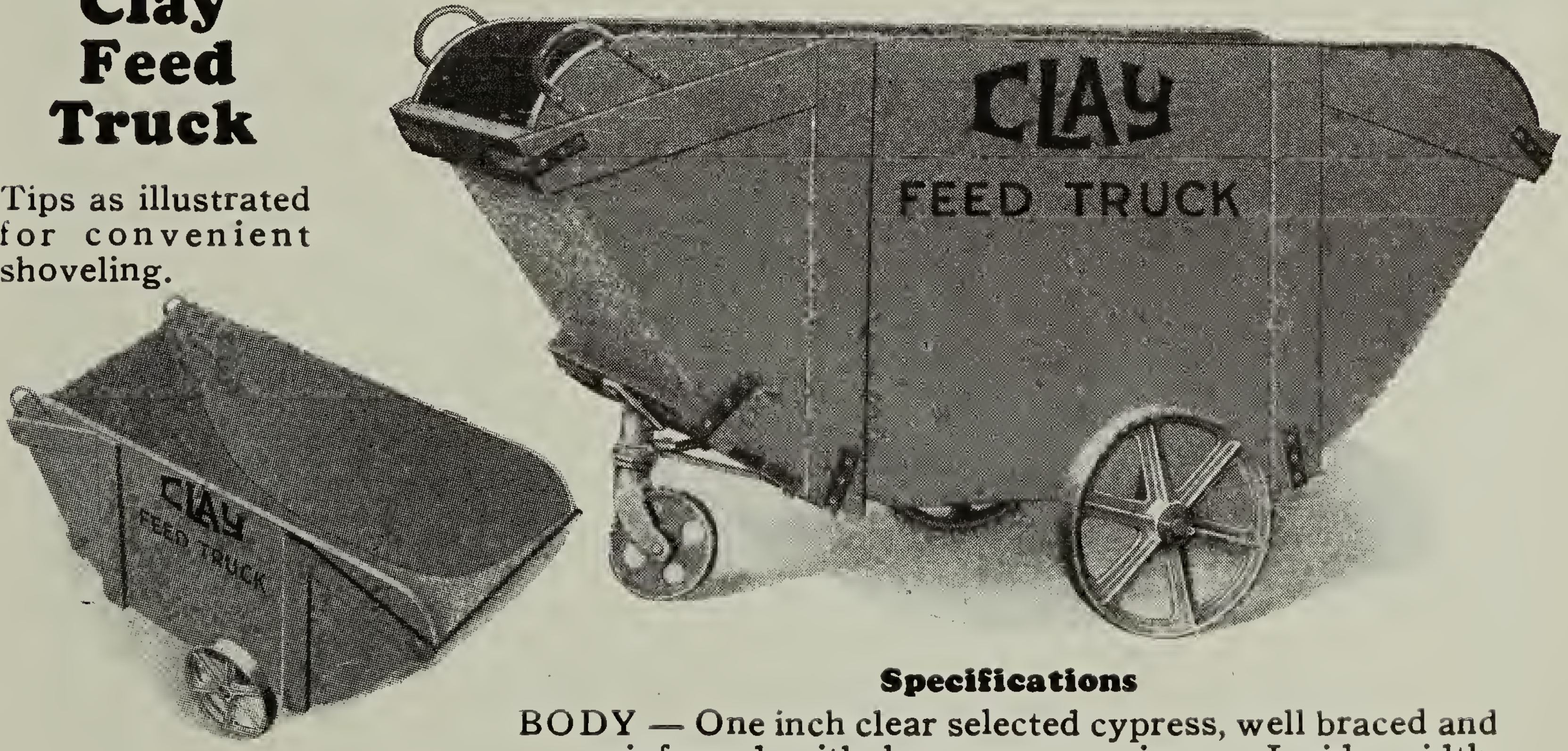
BAILS — 1½x½ in. heavy channel steel; reinforcing the sides to which they are securely bolted. Bails firmly drawn together at top by means of heavy bolt on which the chain pulley revolves.

GEARED HOIST has proper ratio for easy lifting. Tub lowers to 87 inches below track and raises to 42 inches below track. One handle operates both clutch and brake. Complete hoist same as carrier C102.

TROLLEY WHEELS — 4½ in. diam. and roller bearing; mounted tandem in swivel hangers, which permit wheels to follow track curves and switches without binding or jerking. Cannot jump track.

Clay Feed Truck

Tips as illustrated for convenient shoveling.



Specifications

BODY — One inch clear selected cypress, well braced and reinforced with heavy corner irons. Inside width, 26 inches; length, 66 inches; depth, 24 inches. Axle length, 35 inches. FINISH — Gray.

BOTTOM — 20 gauge galvanized steel; continuous and smooth to the top of each end.

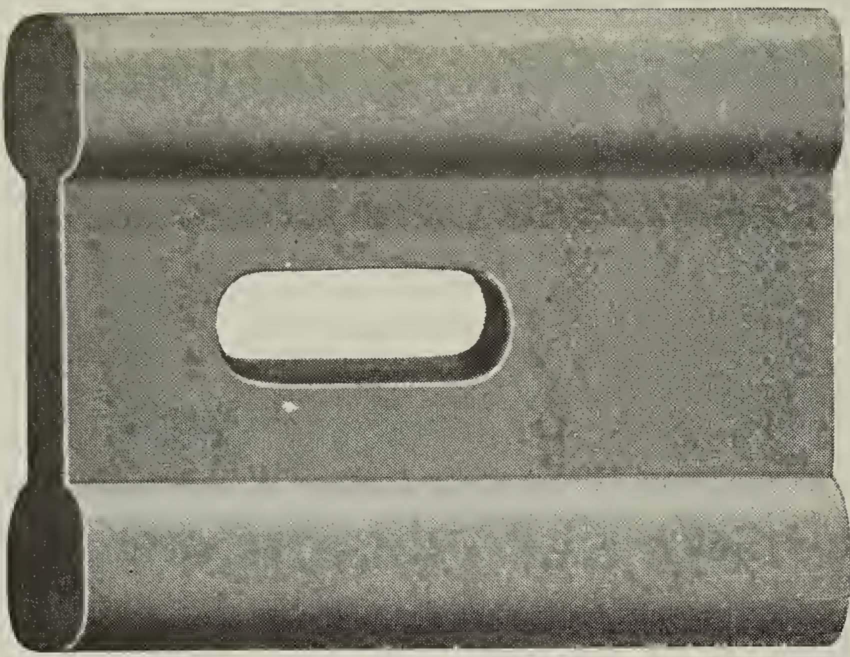
MAIN WHEELS — Gray iron 12 inches in diameter; 2 inch face roller bearings.

SWIVEL WHEEL — Grey iron, 6 inches in diameter; 2-inch face, with ball-bearing swivel. Rubber tires supplied at extra cost if specified.

CAPACITY — 16 bushels.

FT137 — Metal bottom feed truck. Not crated, 140 lbs. Crated 170 lbs.

Clay I-Beam Track and Hangers



ACTUAL SIZE

CLAY I-Beam Track has great strength. Bolted tightly to the hangers makes track absolutely solid. The narrow tread and rounded surface gives least resistance to carrier wheels. Sleet and snow doesn't collect on the narrow CLAY track.

Although it supports any carrier load CLAY track can be bent cold to any curve desired. No special curves to purchase.

C110 — I-Beam Track (Reg. 12 ft. length) per ft., 1¾ lbs.

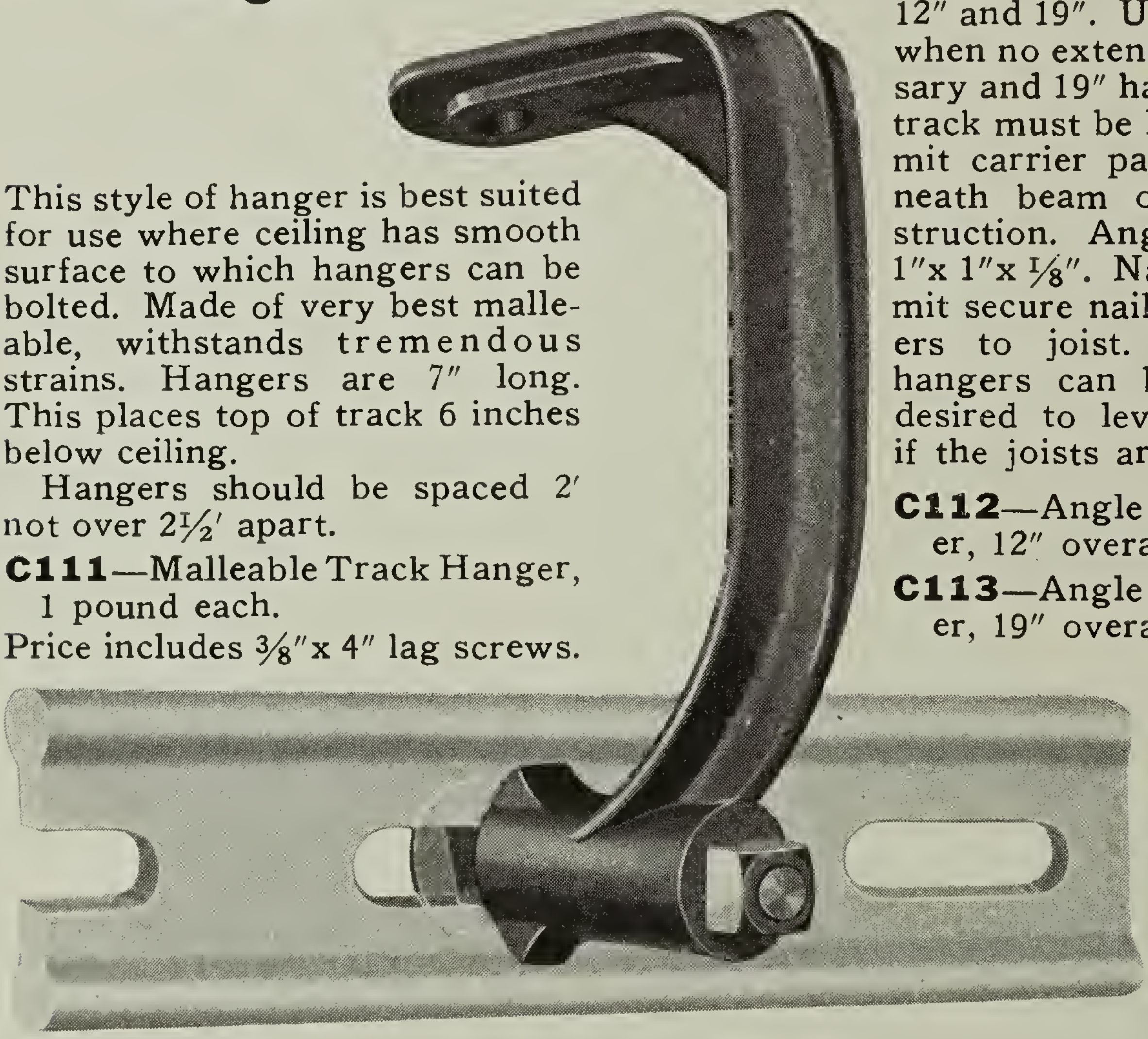
Malleable Track Hanger

This style of hanger is best suited for use where ceiling has smooth surface to which hangers can be bolted. Made of very best malleable, withstands tremendous strains. Hangers are 7″ long. This places top of track 6 inches below ceiling.

Hangers should be spaced 2′ not over 2½′ apart.

C111—Malleable Track Hanger, 1 pound each.

Price includes ⅜″x 4″ lag screws.

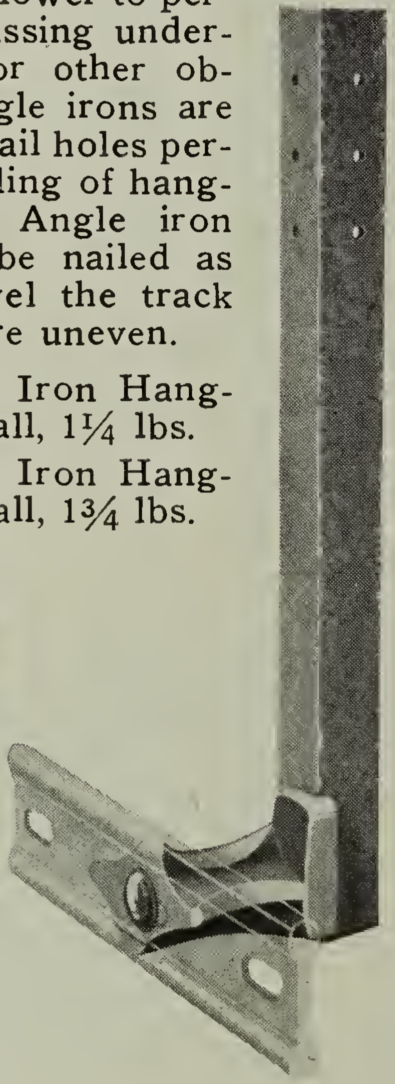


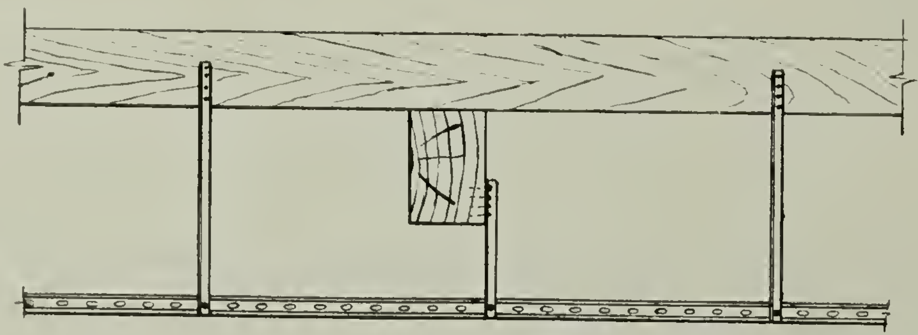
Angle Iron Track Hanger

Furnished in two lengths 12″ and 19″. Use 12″ length when no extension is necessary and 19″ hangers where track must be lower to permit carrier passing underneath beam or other obstruction. Angle irons are 1″x 1″x ⅛″. Nail holes permit secure nailing of hangers to joist. Angle iron hangers can be nailed as desired to level the track if the joists are uneven.

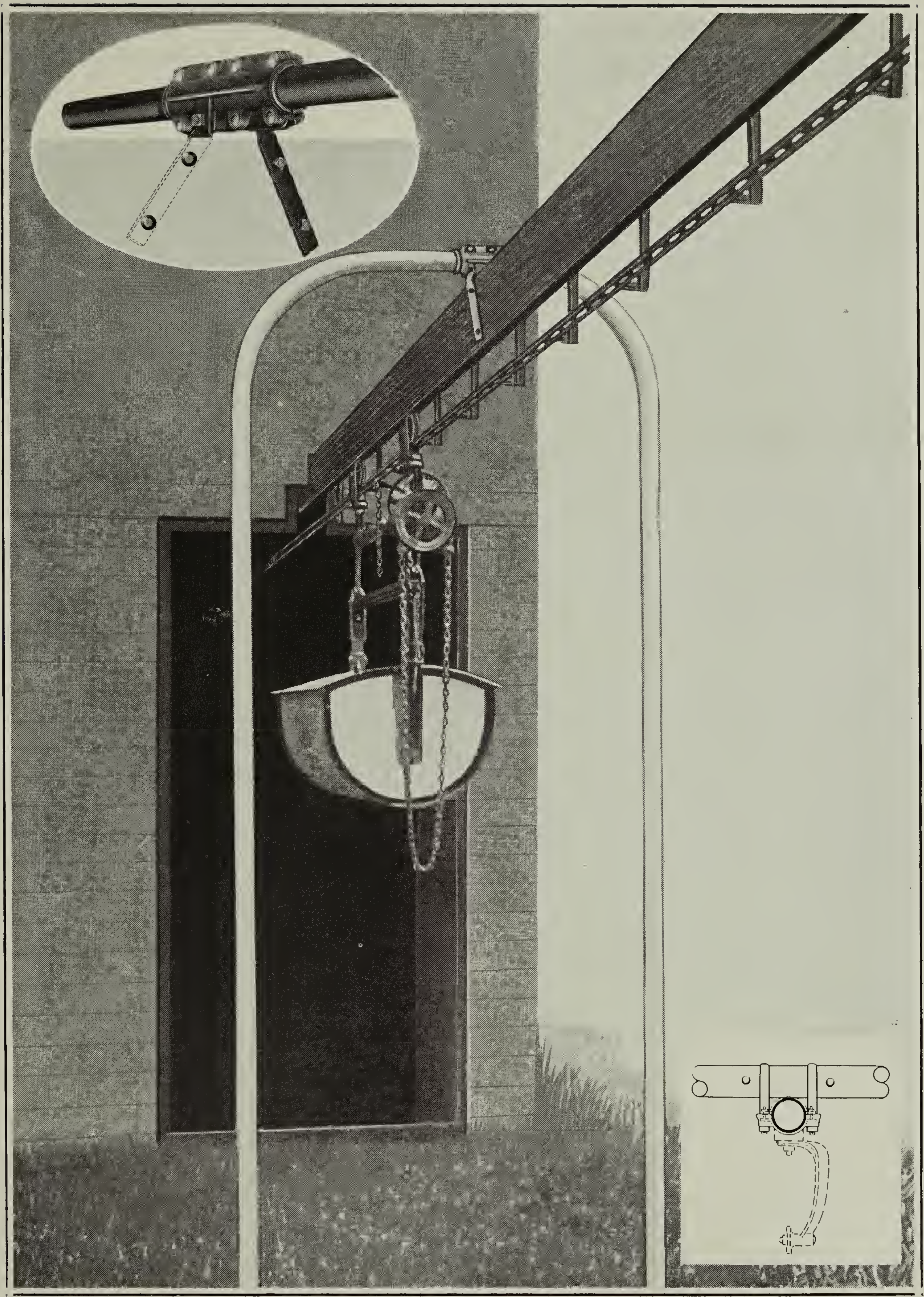
C112—Angle Iron Hanger, 12″ overall, 1¼ lbs.

C113—Angle Iron Hanger, 19″ overall, 1¾ lbs.





Track lowered with Extension Hangers. Side braces needed about 15 feet apart.



Clay Arch For Outside Track

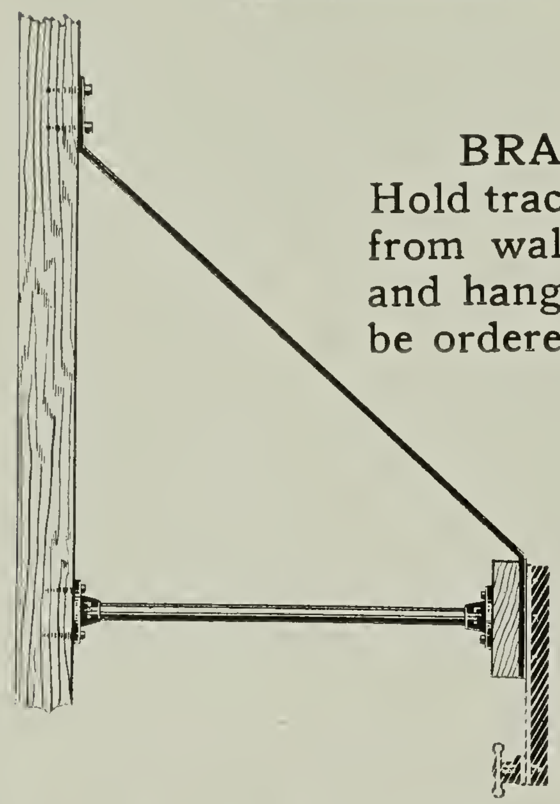
A very simple and economical arch support for outside track. Legs should be set in cement. Pipe is 2¼″ reclaimed flues, finished aluminum. Includes forged strap iron hangers to attach wood beam.

Standard size 14′ high over-all, 4′ between posts. For ground 5′ or more lower than barn floor order 16′ or 18′.

Upper left corner shows heavy malleable clamp with iron straps for plank.
Lower right shows method of attaching 2⅜″ O. D. pipe support for track.

C114 — Track Arch 14 feet. Weight, 73 pounds.

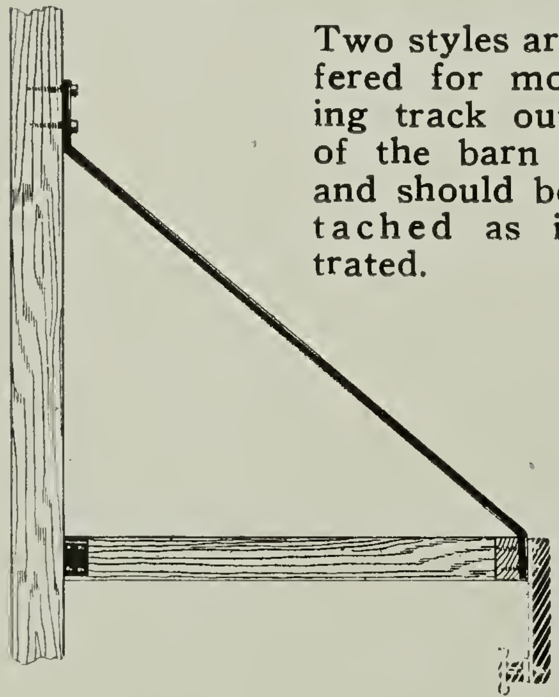
Outside Wall Track Brackets



BRACES
Hold track out 36″ from wall. Track and hangers must be ordered extra.

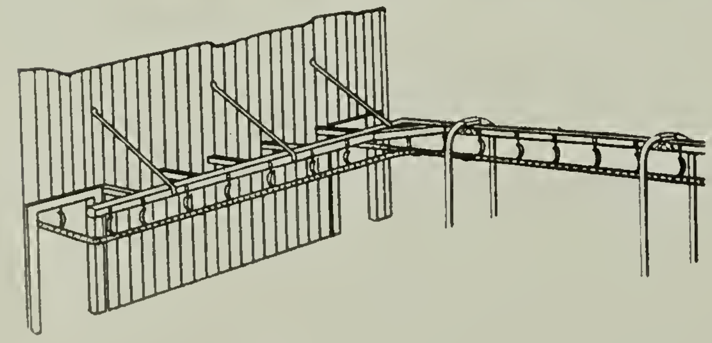
ALL-STEEL TRACK SUPPORT
C115 — Weight, 13 pounds.

Outside Wall Track Brackets

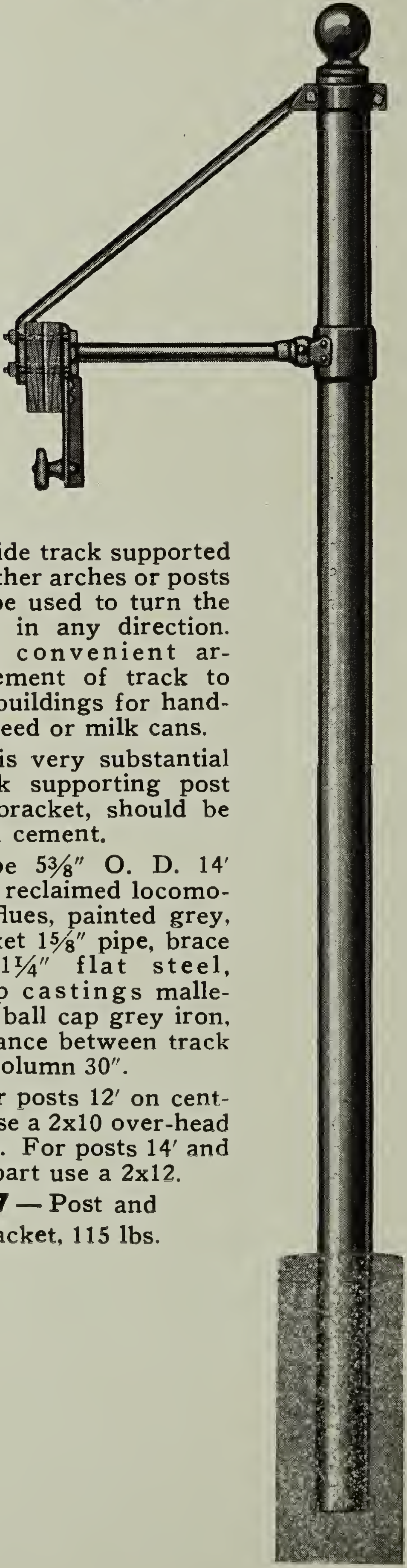


Two styles are offered for mounting track outside of the barn wall and should be attached as illustrated.

STRAP IRON BRACE
C116 — Weight, 3 pounds.



Steel Post and Bracket Track Support



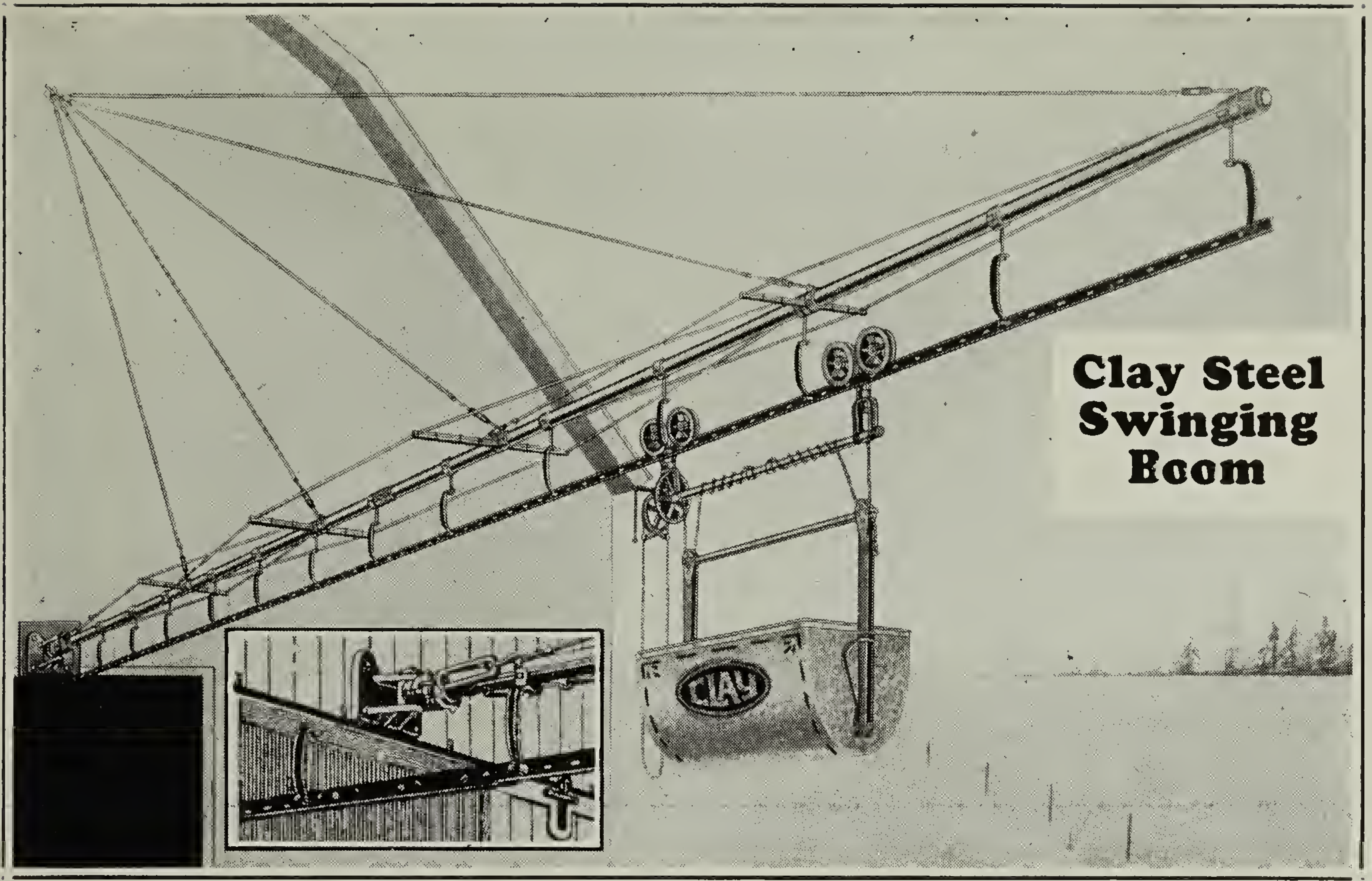
Outside track supported by either arches or posts can be used to turn the track in any direction. Very convenient arrangement of track to join buildings for handling feed or milk cans.

This very substantial track supporting post and bracket, should be set in cement.

Pipe 5⅜″ O. D. 14′ long, reclaimed locomotive flues, painted grey, bracket 1⅝″ pipe, brace ¼″ x 1¼″ flat steel, clamp castings malleable, ball cap grey iron, clearance between track and column 30″.

For posts 12′ on centers use a 2x10 over-head beam. For posts 14′ and 16′ apart use a 2x12.

C117 — Post and Bracket, 115 lbs.



THE CLAY Swinging Boom provides a dumping area over eight times that of stationary track, same length, yet leaves yard clear of posts. It swings either way to side of barn, entirely out of the way. Very convenient for dumping manure into spreader.

Length of booms should not exceed three times the distance from track to place above where guy wires will be fastened. When ordering give this distance as well as length of boom. Unless otherwise stated we will supply guys to reach vertical height one-third the length of boom ordered.

SPECIFICATIONS

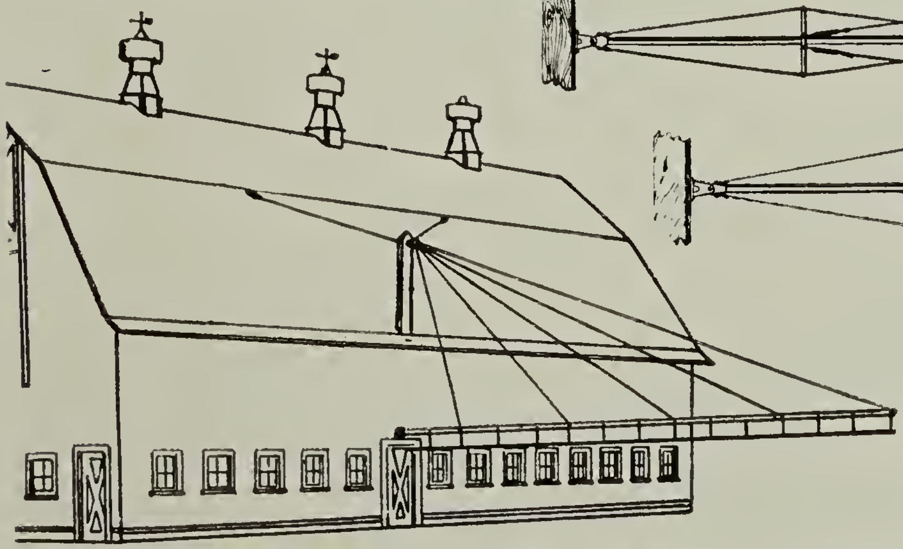
Main Pipe 2⅜ in. O. D. heavy, high-carbon steel pipe.

Cross Arm Truss 1½x$\frac{5}{16}$ in. steel bars.

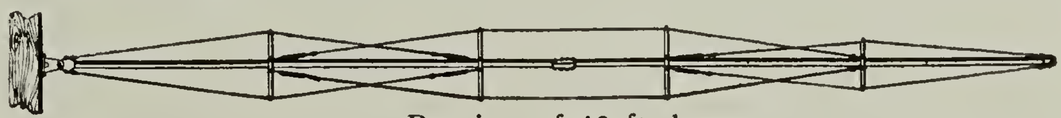
Side Truss Cables and Guy Cables $\frac{5}{16}$ in. 7-strand, galvanized wire ropes with malleable turnbuckles.

Boom Hinge Bracket and Socket, heavy gray-iron with shaft steel pin. Hinge weight, 18 lbs. Flexible spring steel track connector consists of 4 tempered flat spring steel pieces, curve easily.

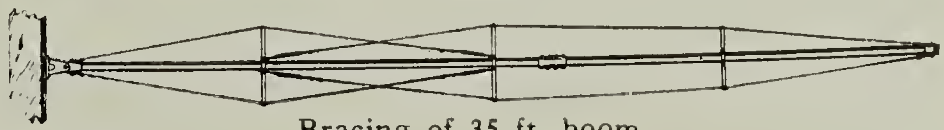
C20	— 20 ft. Booms	195 lbs.
C25	— 25 ft. Booms	250 lbs.
C30	— 30 ft. Booms	295 lbs.
C35	— 35 ft. Booms	335 lbs.
C40	— 40 ft. Booms	384 lbs.



Run a timber mast up inside of barn to gain sufficient height to fasten boom on side of barn. Timber must be securely bolted and braced two ways.



Bracing of 40 ft. boom.



Bracing of 35 ft. boom.

Top Views of Clay Boom

Note rigid steel construction. Sturdy cross arms and stout truss cables give boom bridge-like rigidity. The CLAY Boom will hold tremendous load without buckling, twisting or sagging.

Rigid Track Switches

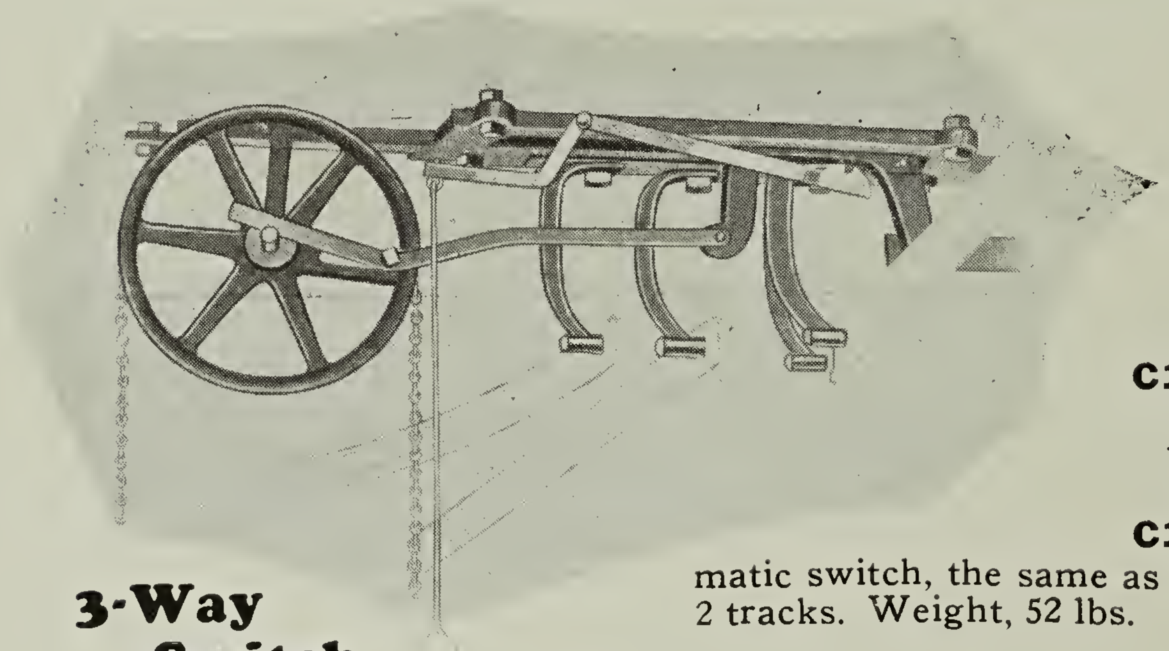
A PULL on the chain throws switch to desired track, at the same time securely locking it in place. Safety stops at ends of open tracks prevent carrier from running off. The shifting mechanism is smooth, positive and easily operated.

Switch cannot be jarred open or moved except by operating shift wheel.

The CLAY Automatic switches are reversible.

Attached to ceiling or joist by lag screws. If track is lowered by means of extension hangers, switch must be lowered also.

Automatic Switches

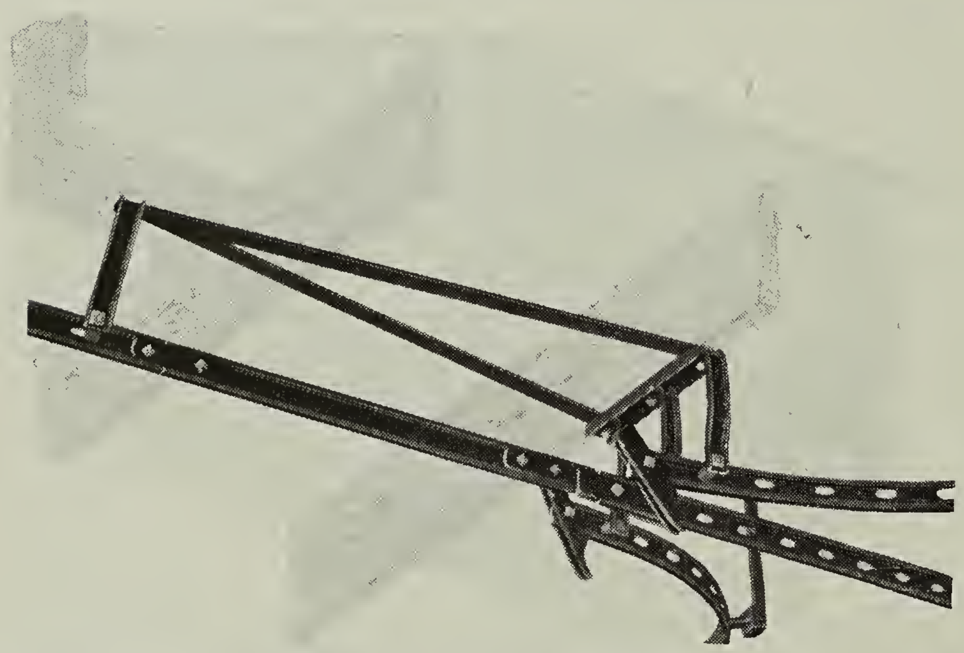


3-Way Switch

C124—3 way automatic switch as illustrated at left. Weight, 66 lbs.

C123—2 way automatic switch, the same as illustration except for 2 tracks. Weight, 52 lbs.

Hand Track Switches

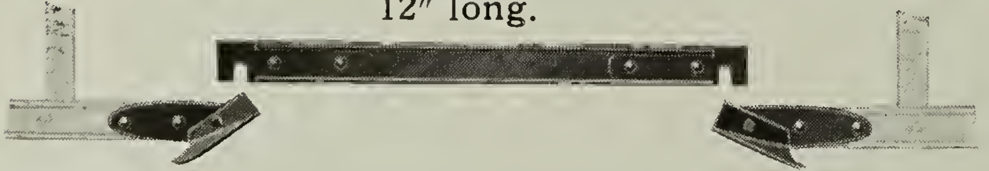


The hand switches are lower in cost than the automatic style, but of course, not as convenient. When track is out of easy reach automatic switches should be used. Of course, with hand switches out of easy reach a 2′ handle can be used to change it. Open track on these hand switches have a safety stop. The price includes hangers, couplings, connecting castings and steel tie bars at the top, curves leading from switches are formed when the track is erected.

C121—3 way hand switch, as illustrated	11 lbs.
C120—2 way hand switch	9 lbs.

Removable Track Section

12″ long.



Used where two rigid tracks cross or to permit closing of sliding doors. Fits into pivoted sockets on ends of track, which when released, automatically becomes stop blocks and prevents carrier from running off. Price includes sockets.

C122—Removable track section .... 6 lbs.

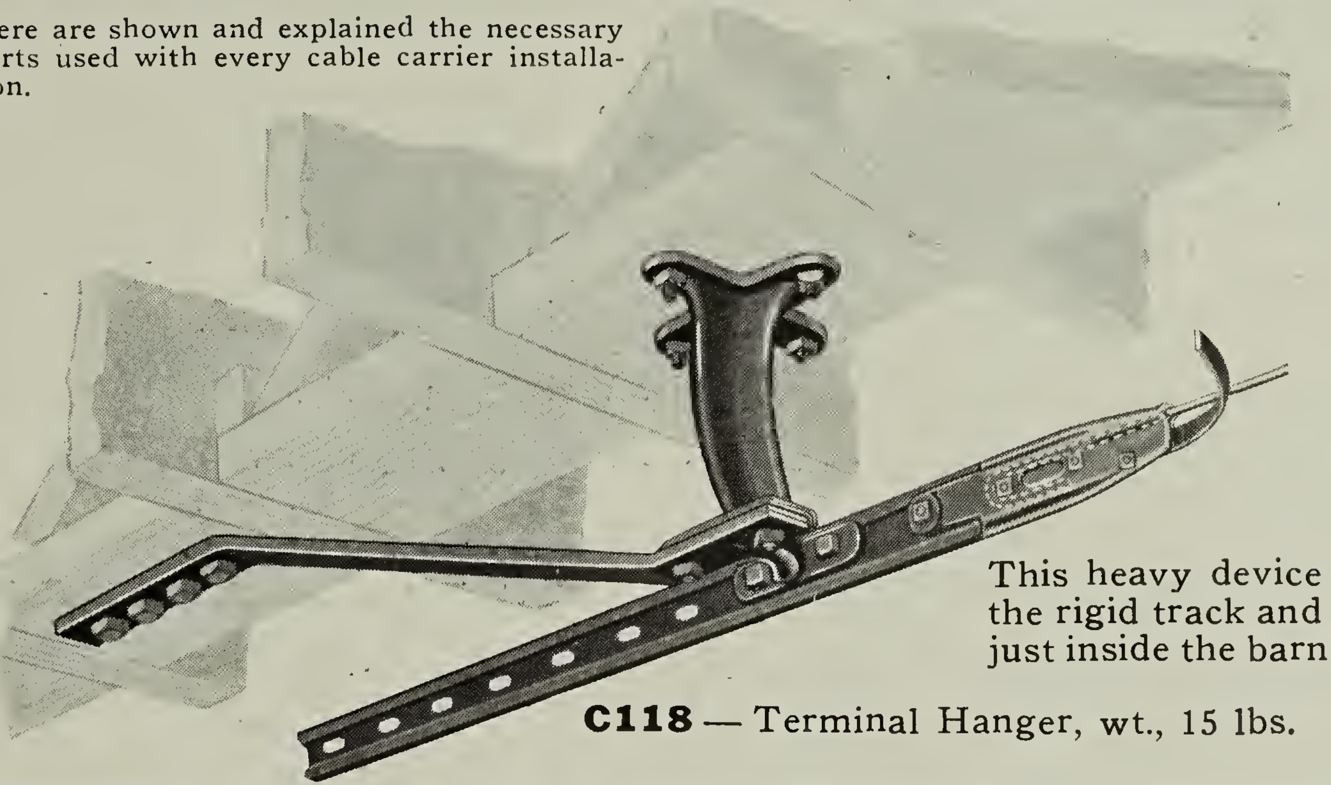
Crossover

Not illustrated. Used where two tracks cross. Turns and locks.

C128

Terminal Hanger and Combination Connection

Here are shown and explained the necessary parts used with every cable carrier installation.



This heavy device joins the rigid track and cable just inside the barn door.

C118 — Terminal Hanger, wt., 15 lbs.

Mount this device rigidly. Spike 2x4's onto side of joists about 2″ from bottom of joist. Then fit a 2x10″ hardwood plank between the joists and nail onto the 2x4 blocks. Add bridging between the joists.

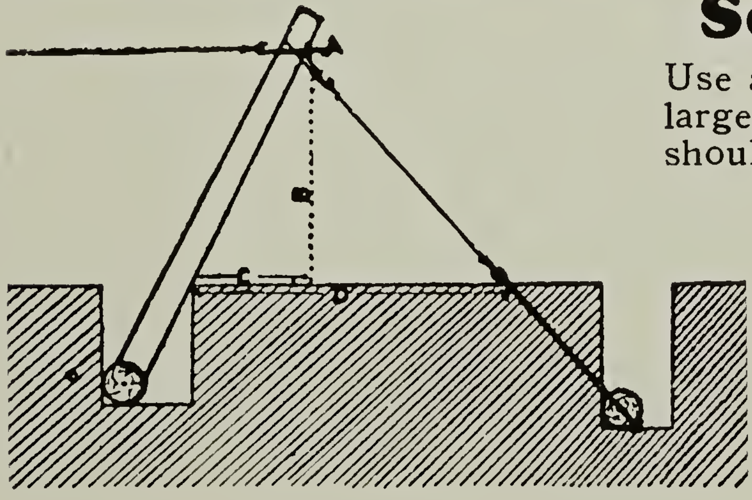
First, erect the heavy malleable terminal hanger.

Next, attach the strap iron brace which is bolted to the plank. Then erect the first length of track.

Third, fasten the I-Beam track to terminal hanger leaving one hole project to fasten combination connection. Finally, connect the cable and stretch tighter by means of tension bolt through anchor post in yard.

Install remainder of solid track by working back into the barn.

Terminal hanger consists of very heavy malleable hanger with bolts, a heavy strap iron brace and clamp castings which connects the cable to the rigid track. This device permits use of switch and curve adjacent to doorway.



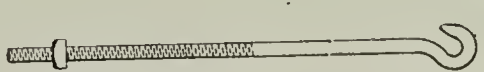
Set Anchor Post Solidly

Use a large post 12″ to 14″ in diameter, below it a large flat rock or cement base. The dead man anchor should be 5′ long buried 5′ deep and well back of the anchor post, at least 1½ times the height of the cable at the anchor post. Top of the anchor post should lean well back about half as far as the height of the cable, mount the cable tension bolt higher than the cable at the doorway, 2½″ rise for every 10′ length.

C145 — 15 ft. anchor complete, 24 pounds
C144 — 20 ft. anchor complete, 27 pounds

A shove sends the CLAY Cable Carrier out desired distance, where it dumps itself. Outer end of cable is higher. After dumping, the Carrier runs down cable into barn automatically.

TENSION BOLTS

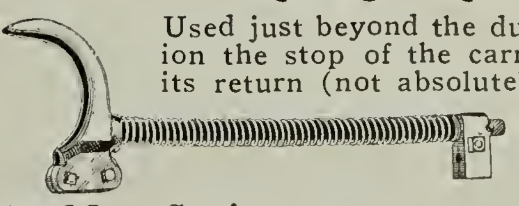


Used to fasten cable track at top of anchor just as in Fig. A.

¾″ x 33″ including 2 nuts and washers.

C143 — Weight .... 5 lbs.

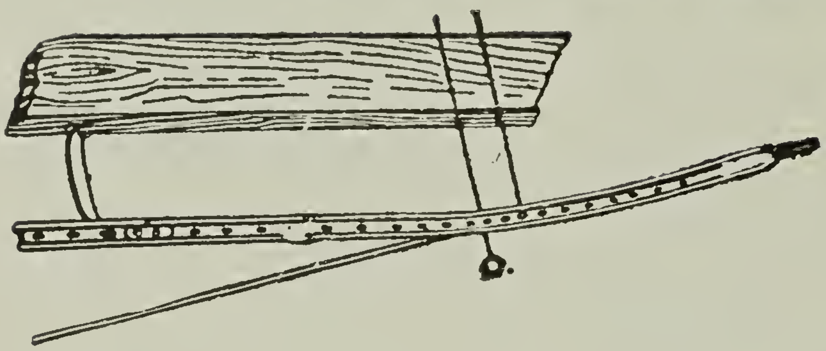
Spring Stops



Used just beyond the dump trip to cushion the stop of the carrier and quicken its return (not absolutely necessary but advisable to use.)

C142 — Spring stop .... 4 lbs.

Clay Track Parts



Drop Splice Switch

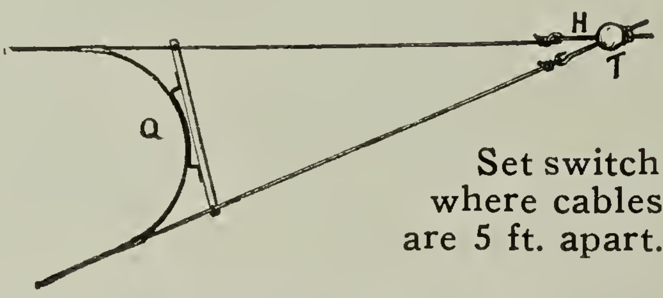
May be used inside the barn to join rigid to cable track but intended principally for a rigid track running outside parallel to the barn wall and to join a cable running out of doorway. The chain and pulley lift the formed end of the rigid track to let the carrier pass on the cable.

C127R — Drop splice switch. The reverse. Weight, 8 pounds.

C127L — Drop splice switch. As illustrated. Weight, 8 pounds.

Anchor Post Switch

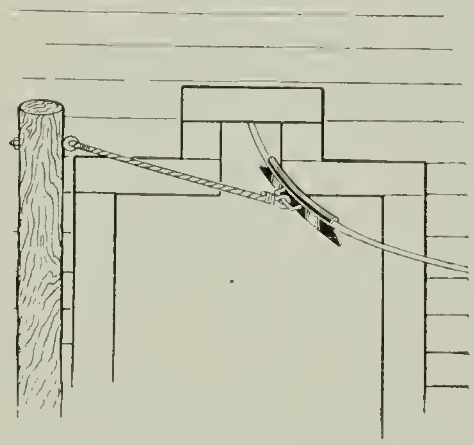
Used where two cables run to the same post in yard (anchor post requires two tension bolts and two anchors, C115 or C145). While the use of this switch hinders the automatic return of the carrier from the yard it sometimes is necessary when arrangement of barn makes it impossible to cross from one alley to the other and moving carrier through one door.



Set switch where cables are 5 ft. apart.

C146 — Anchor Post Switch. Weight, 28 pounds.

The Clay Flexible Curve



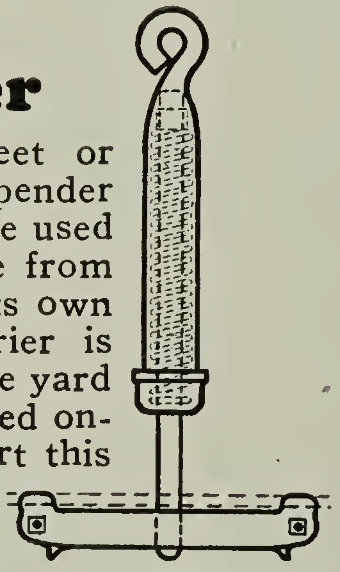
Used when cable must be run at an angle from doorway to post in yard. This oftimes is necessary to avoid obstruction in the yard. Cable is fastened onto side of barn or to a post mounted several feet from the door. Made of flexible steel.

C149 — Flexible curve.

Spring Suspender

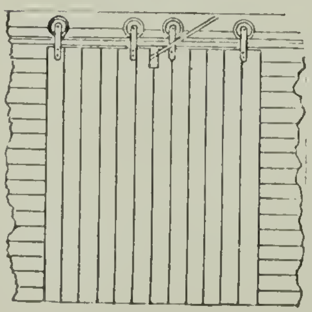
When cable is 90 feet or longer a spring suspender as illustrated should be used which keeps the cable from sagging either from its own weight or when carrier is run on it. A post in the yard having brace arm bolted onto it is used to support this spring suspender, or use C-114, page 111.

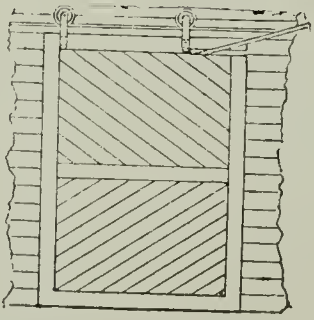
C148 — Spring suspender, 3 lbs.

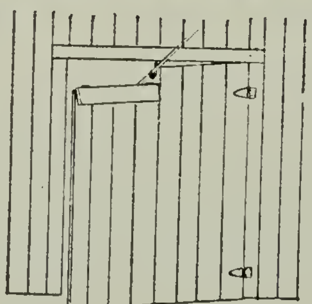


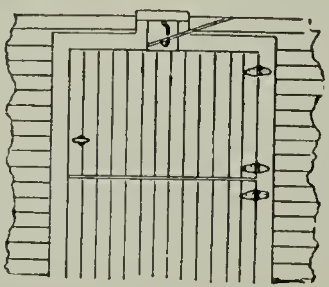
Spring Suspension Hanger for Cables over 90 feet in length.

Suggestions For Track Through Door



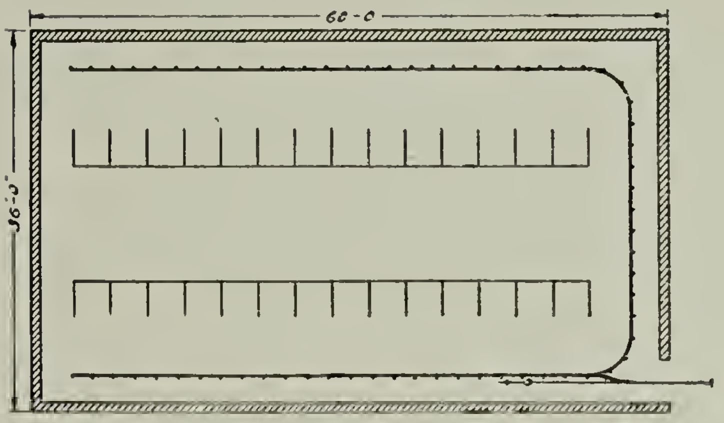






When rigid track is used no opening in door is necessary if Removable Section C122 page 114 is used.

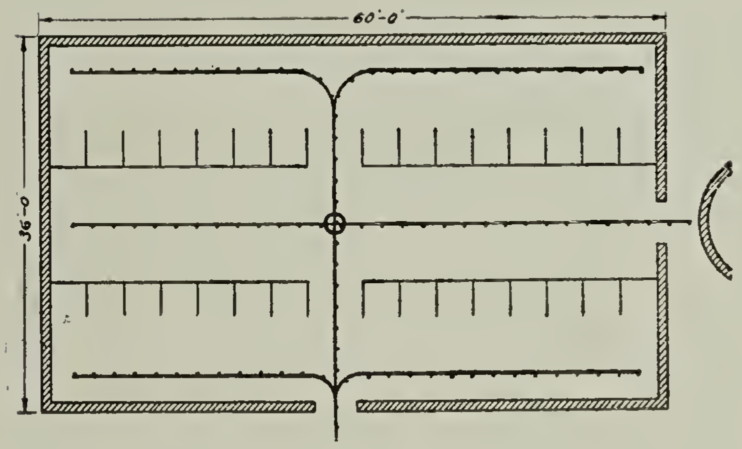
Carrier System—Parts Required



No. 1

Plan 1 Requires

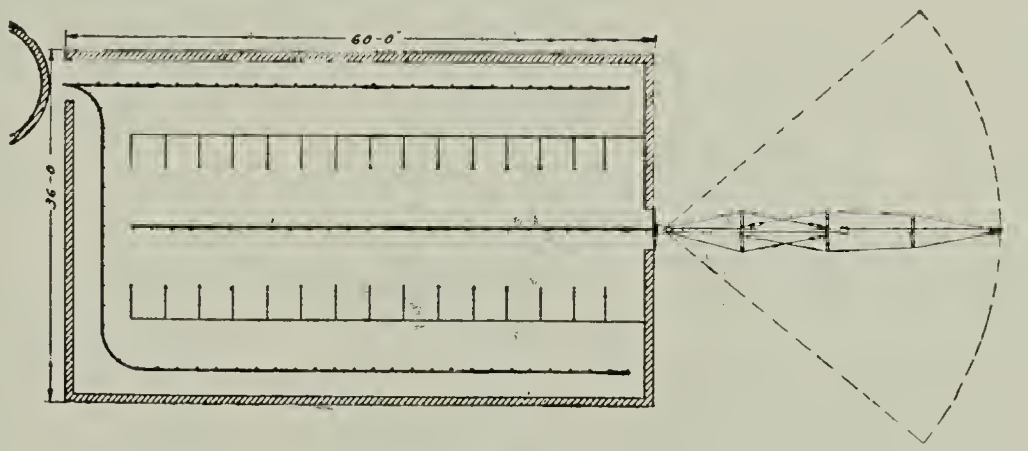
1 **C101** — Carrier
130 ft. **C110** — I-beam track
65 **C112** — 12″ angle hanger
1 **C123** — 2-Way auto switch
1 **C118** — Terminal hanger
1 **C143** — ¾″ tension bolt
60 **C141** — 4-0 Cable
1 **C142** — Spring stop
1 **C144** — 15 ft. anchor



No. 2

Plan 2 Requires

1 **C102** — Carrier
1 **C105** — Feed Carrier
190 ft. **C110** — I-beam track
95 **C112** — 12″ angle hangers
1 **C128** — Cross switch
1 **C123** — 2-Way auto switch
1 **C124** — 3-Way auto switch
3 **C114** — Arch track supports



No. 3

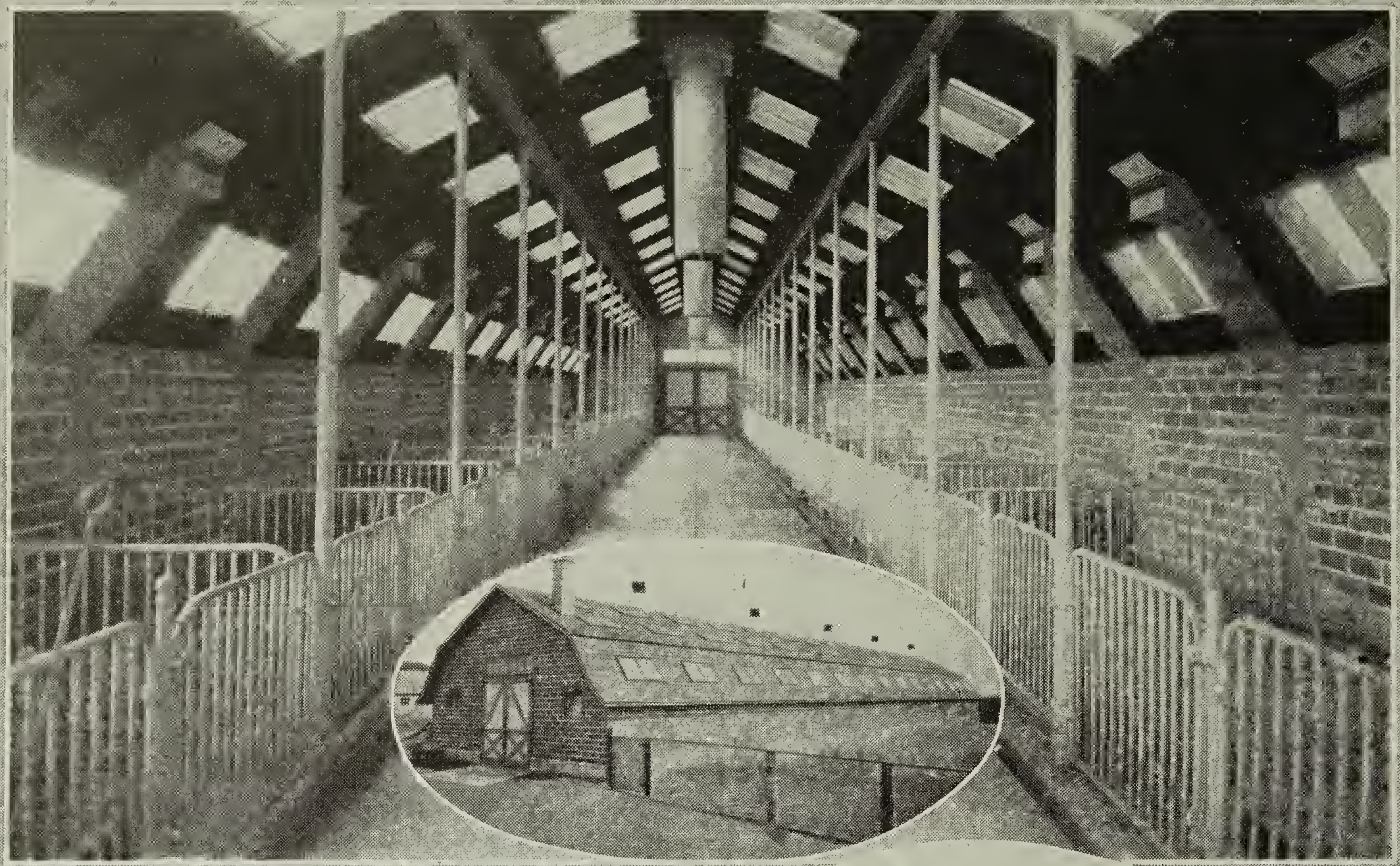
Plan 3 Requires

1 **C102** — Carrier
1 **C105** — Feed carrier
200 ft. **C110** — I-beam track
100 **C112** — 12″ angle hangers
1 **C133** — 35 ft. boom
1 **C123** — 2-Way auto switch

Plan 4

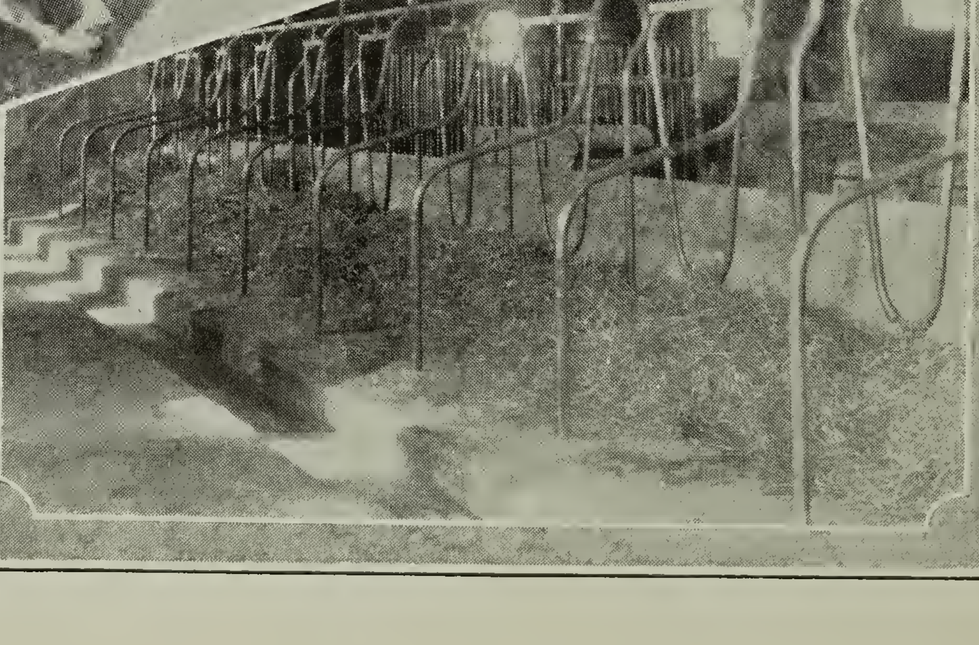
Not illustrated, consists of straight run 50 ft. rigid track, 60 ft. cable.

1 **C100** — Carrier
50 ft. **C110** — Rigid track
25 **C112** — 12″ angle hangers
1 **C118** — Terminal hanger
60 ft. **C141** — 4-0 cable
1 **C143** — ¾″ tension bolt
1 **C144** — 15 ft. anchor



Hog Barn State Hospital, Independence, Iowa. CLAY Galv. Steel pens, pipe spindles and tilting cast iron hog troughs. Walls and roof higher than advisable.

Left and below illustrate CLAY extension columns (see page 84).



CLAY

Little Pigs Saved—

Paid *for* this Complete CLAY Piggery

"I Saved 101 Pigs Out of 102 Farrowed

"I am very much pleased with my CLAY Hog House" says J. A. Moffett, Toledo, Iowa.

This year I saved 101 pigs out of 102 pigs farrowed. The last year that I farrowed pigs in my old hog shed I was only able to save 30 from 14 sows. A little better than two pigs per sow.

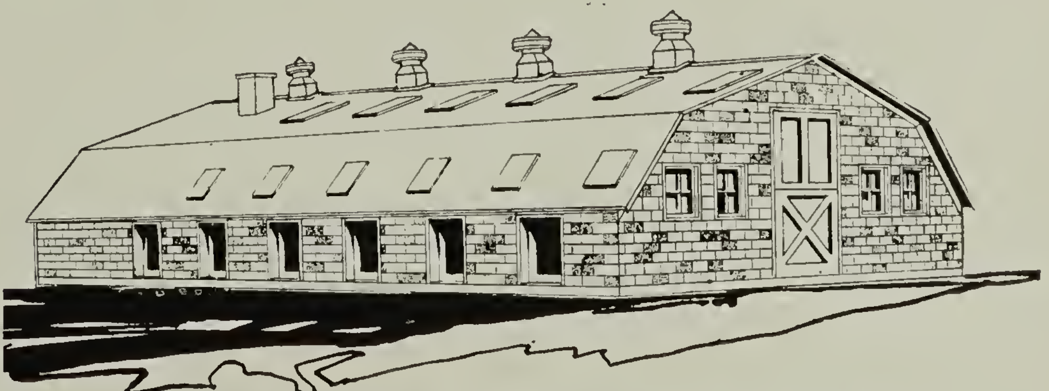
I like the arrangement of the windows fine, for there is no shadow left on the floor even though there is 4′ space between the windows. Always lots of good sunshine, which makes the little pigs grow. The ventilation system is perfect. When I had sixty head in the house last winter even when it was twenty below zero, there was very little frost inside the building.

DECIDE now to build a modern CLAY Hog House — the little pigs saved will pay the cost. You hog men know how staggering are the losses of little pigs when housed in poor quarters.

Mr. Moffett saved only three pigs per sow in his old hog shed. With his modern CLAY Hog House he saved 101 pigs out of 102 farrowed. Mr. Velta of Deleven, Minn., saved 92 little pigs out of 94 in his CLAY Hog House.

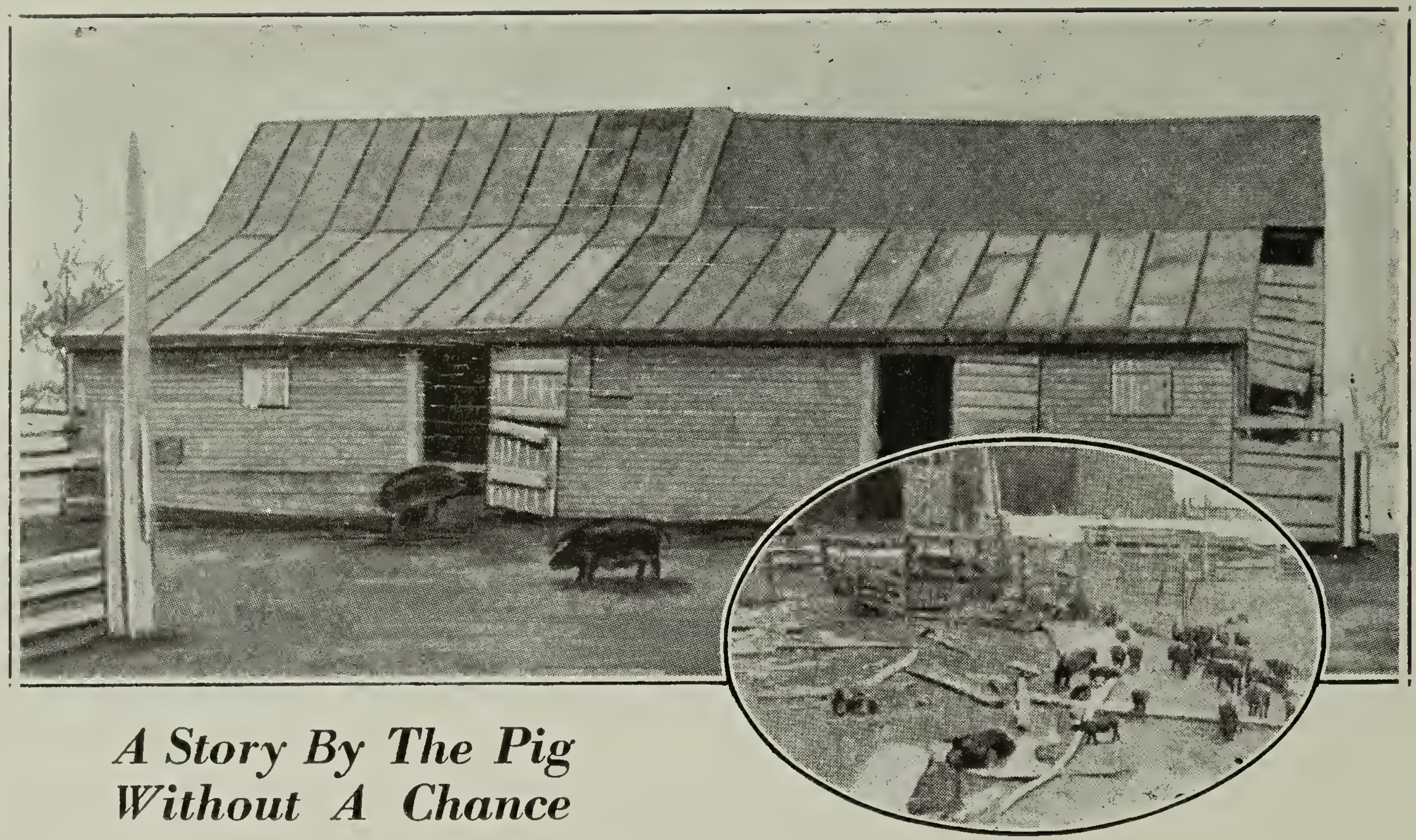
In a modern CLAY Piggery you can farrow pigs earlier, getting them ready for market when peak prices prevail. This nets you from $300 to $400 more net profit each year.

A warm, well ventilated CLAY Hog House makes possible two litters yearly from each sow. Warmth—sunshine—equipment gives little pigs a good start and, "Well Begun Is Half Done."



Clay Equipment Corporation

Cedar Falls, Iowa



A Story By The Pig
Without A Chance

This Is Where I Was Raised

HERE in this dark shed shivering with cold drafts at night and no warm sunshine during the day, I spent my first few weeks of life. My bed was always damp and cold.

My days out of doors were spent in a wallow of manure and foul water.

I had eight brothers and sisters, but my mother laid on all but two of us. Just as well perhaps for many of my cousins caught pneumonia and died. We barely pulled through and now in December hardly weigh 200 pounds.

Born In May—Sold In December for $8.30 per Hundred Pounds

Prices $8.30 for December and $10.42 for September are actual prices paid per hundred pounds during the year 1927. The difference between December price and September price is practically in the same proportion each year.

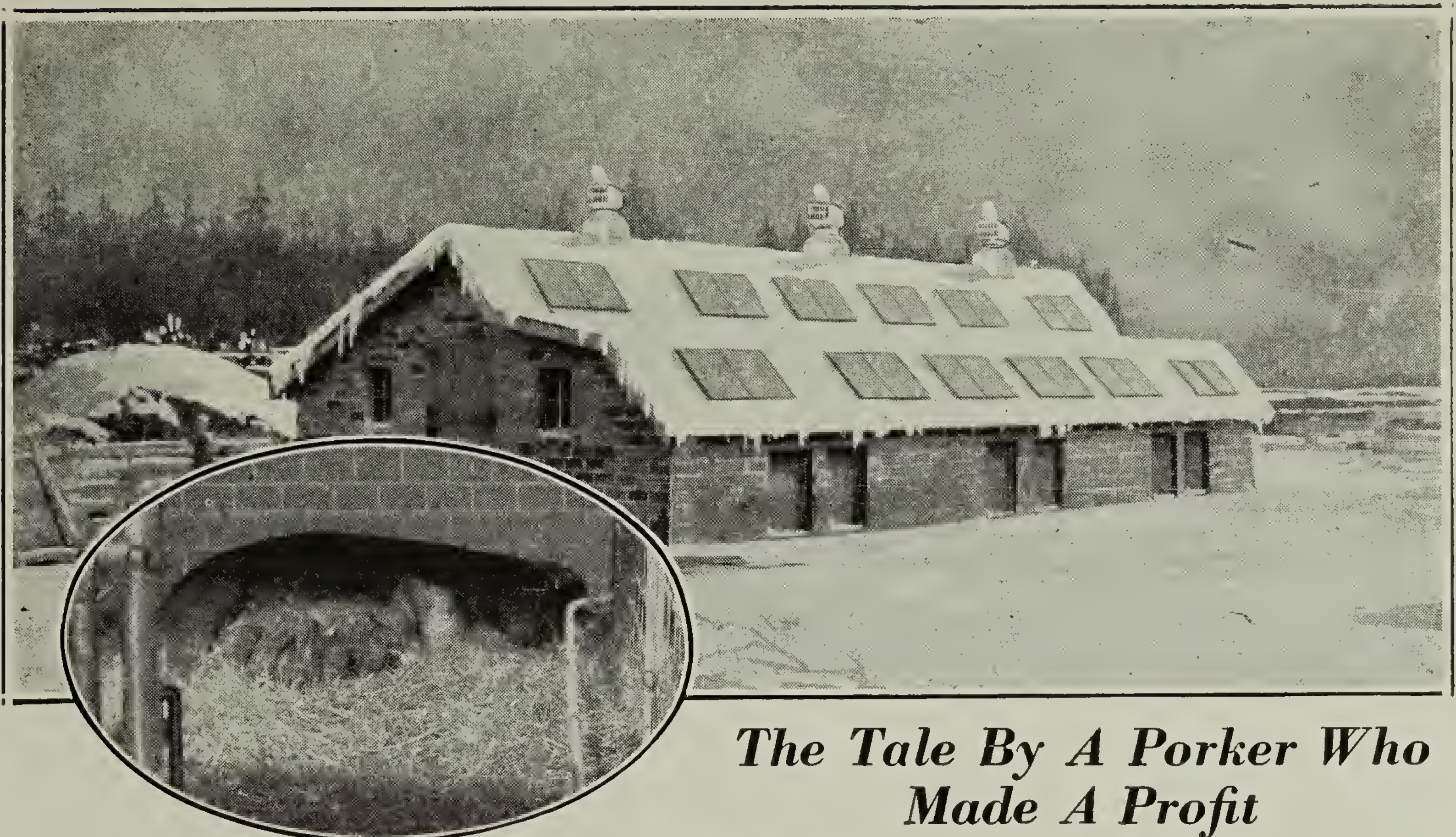
In December Mr. Smith said we weren't doing well, so he would sell us anyway.

He was awfully sore because the market had dropped — there were only 55 of us left.

We Only Earned Cost of Feed

Fifty-five hogs weighing 200 pounds —or 11,000 pounds at $8.30 per hundred paid Mr. Smith only $913.00.

Which Way Are



The Tale By A Porker Who Made A Profit

I Was Born in This Clay Sunlit House

I WAS born while blustry February winds blew over our warm house. I was the picture of health and vitality from the start. I had every chance to become profitable.

The house was well lighted with streams of golden sunshine falling on our backs. We were comfortable in this well ventilated building. Our bedding was always dry and warm.

We were fourteen families in all. The farrow rails saved my brothers, sisters, and cousins from being crushed to death when our mother laid down. We will pay for these rails many times over. The CLAY Steel pens let over 70 per cent of sunshine strike the pen floor.

Born In February—Sold in September for $10.42 per hundred pounds

Mr. Jones is a practical hog man. His sows produce two litters each year. He farrows his spring hogs in February and sells them in September when prices are high. He farrows his fall hogs in September and sells them in April when prices are good.

How We Paid for Our Hog House

We are 14 families — 98 hogs — at 210 pounds each or 20,580 pounds in all. Our sale price is $10.42 or $2,144.44.

You Raising Hogs?

Manley, Iowa
Nov. 15, 1930

Clay Equipment Corp.
Cedar Falls, Iowa.

Gentlemen:

Am glad to inclose my check which pays in full for the complete Clay equipment you furnished for my new hog house.

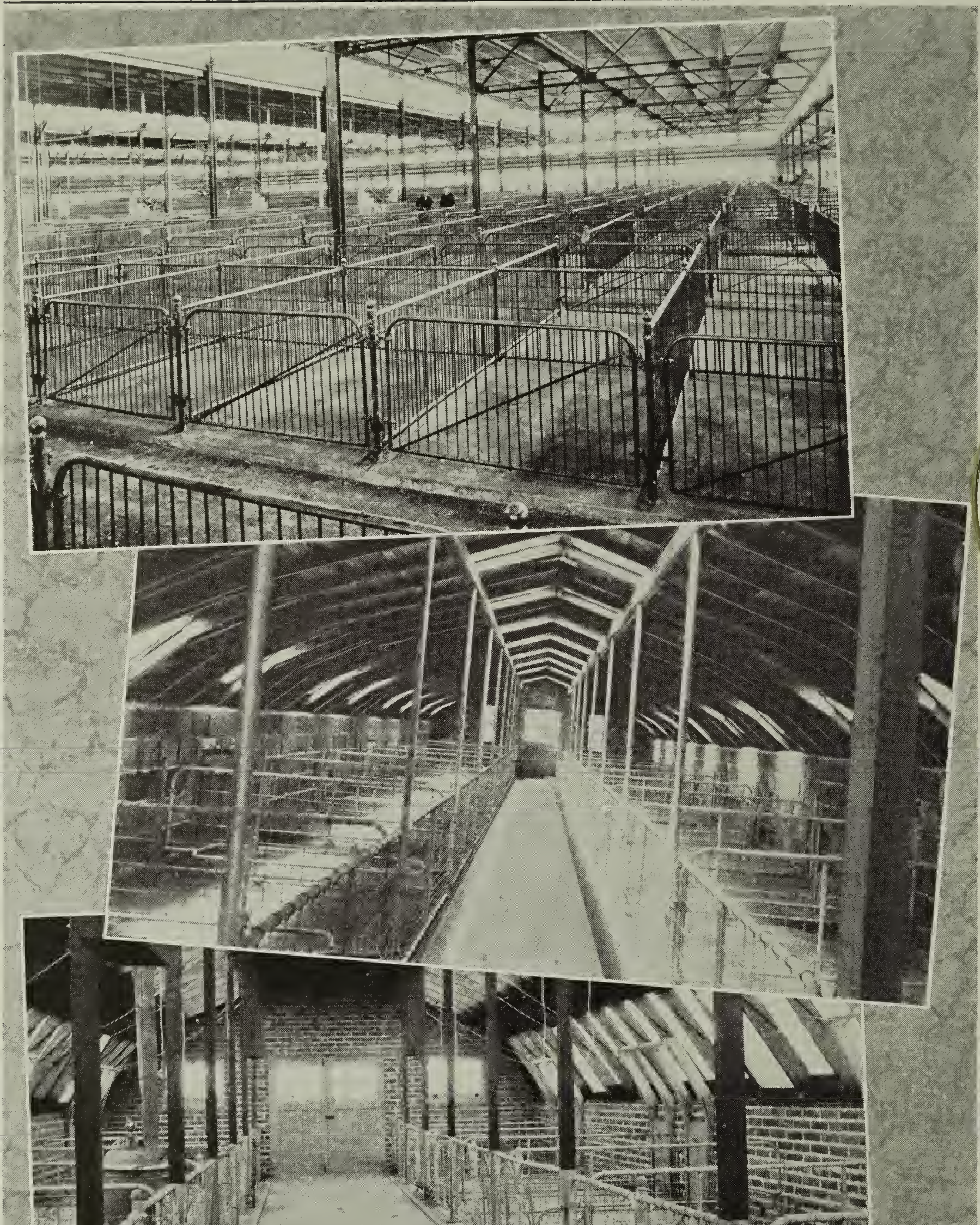
This is the second lot of Clay equipment that I bought from you, and expect to buy your equipment for two more hog houses.

This goes to show that I am absolutely pleased with Clay equipment and am sure it is the most practical hog house equipment that a man can buy. It is very strong, neat appearing and sanitary.

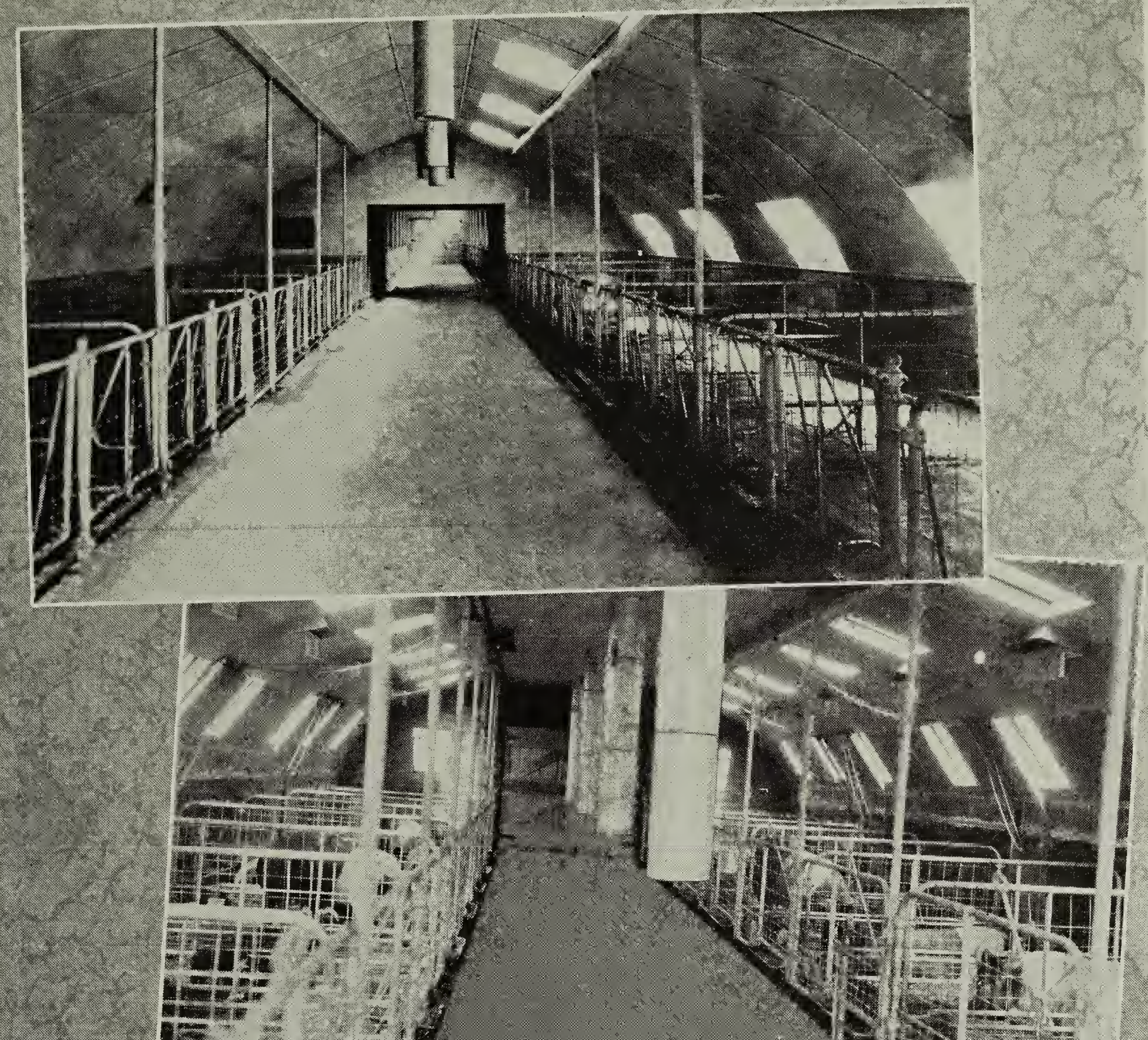
We have part of our partitions hung up and each side thrown into two and three pens instead of the regular smaller ones, thus accommodating separately the brood sows, fattening hogs and fall pigs and they sure are doing fine.

I am glad to pay you for this and appreciate the high standard of your service.

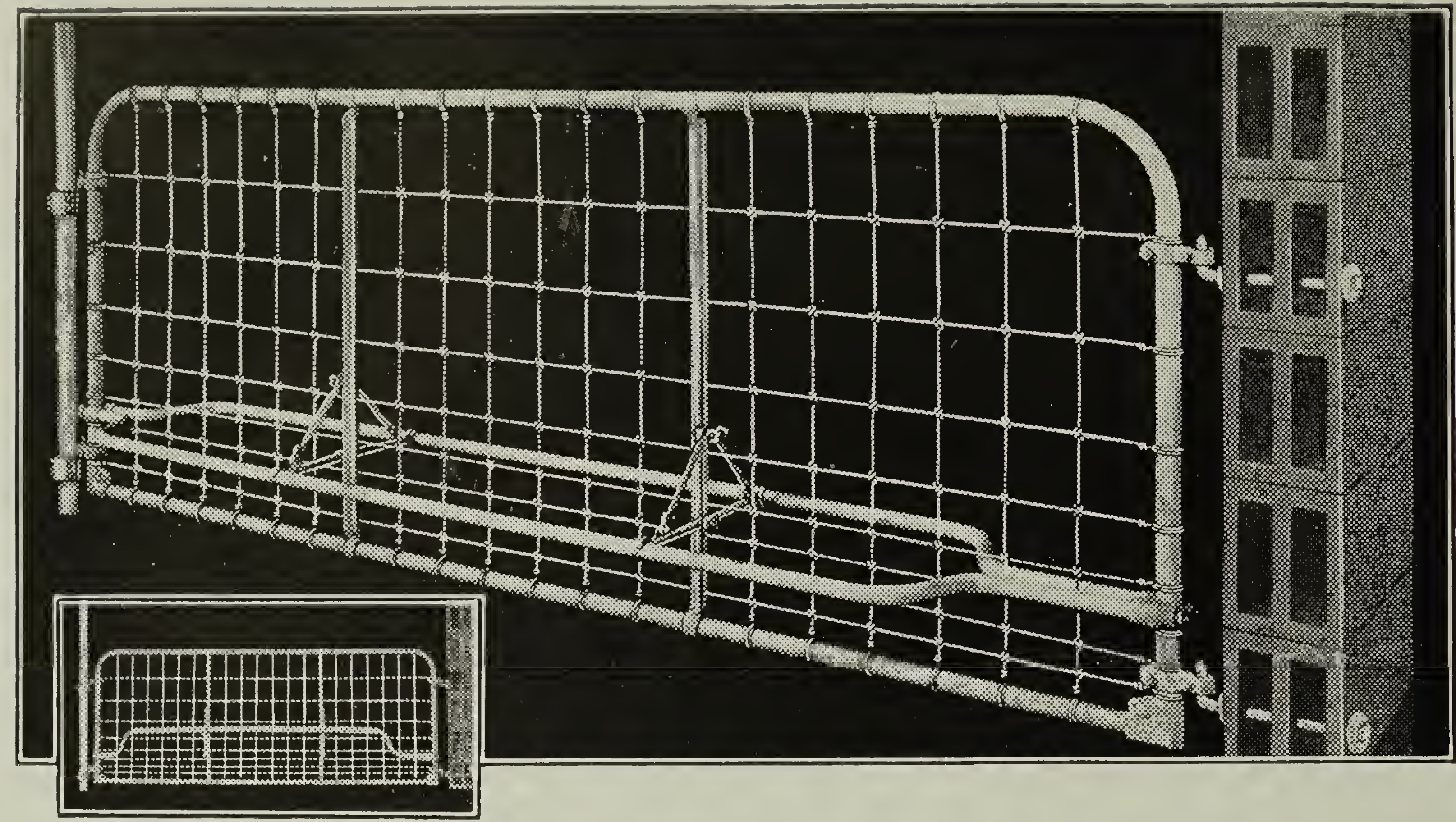
Yours truly,
C. H. WISE.



Top — Rod Spindle Pens, Indiana State Fair.
Middle — Wire Pens, A. W. Jester, Minn.
Bottom — Wire Pens, I. S. College, Ames, Iowa.



Top — Interior, City Work House Hog House, Minneapolis.
Middle — Interior, M. L. Johnson Hog House, Grundy Center.
Bottom — Outside Exercise Pens, U. of Ill., Model Hog House.



Removable Partition Panel

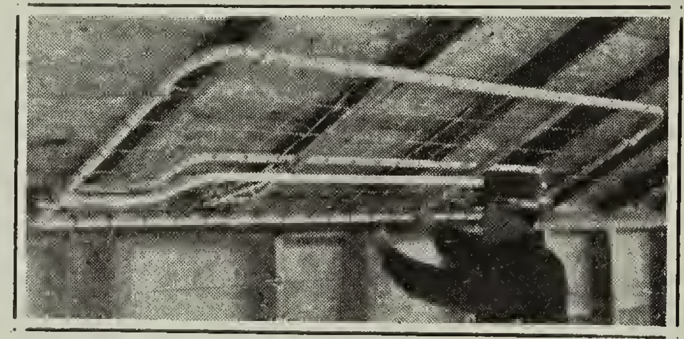
Illustration shows hinges for steel posts and hook bolts for tile or masonry walls. Hinges for wood posts and screw hooks for wood walls are shown below. Can be supplied at no extra charge.

Standard length 7′ 10″, height 3′ 3″.

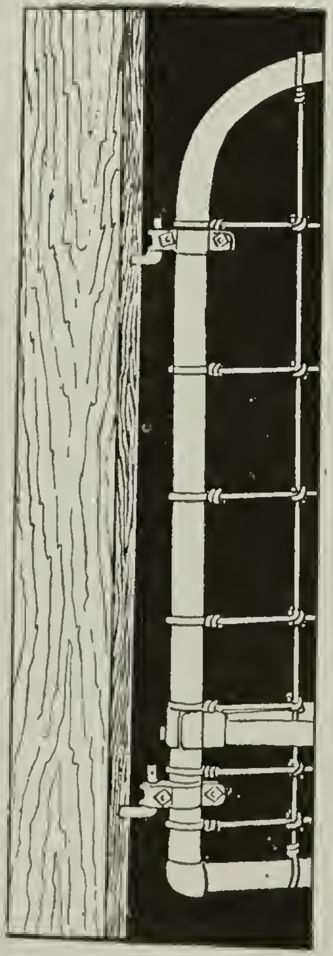
HP142 — Panel for steel post and tile wall 50 lbs. (Folding farrow rails extra.)
HP143 — Panel for wood post and wood wall 50 lbs. (Odd length or extra length, per foot, extra.)
HP149 — Double folding farrow rails 15 lbs.

No. 7 Galvanized wire with welded joints can be supplied at a small increase in cost.

When farrowing season is over the pen partitions are easily removed.

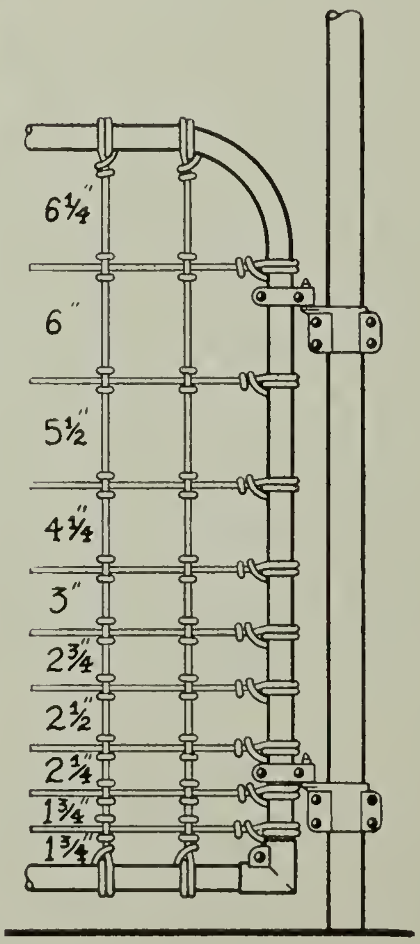


Hang them up, making large feeding floor

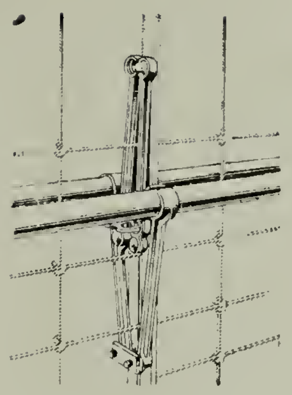


SPECIFICATIONS

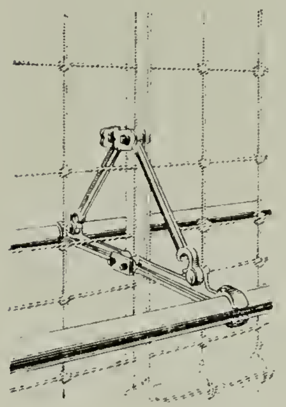
HEIGHT — 3′ 3″.
LENGTH — 7′ 10″ (Between Post and Wall).
FRAME — 1$\frac{5}{16}$″ O. D. Steel Pipe.
VERTICAL BRACES — 2 pieces ¾″ angle steel each.
FILLER — All No. 9 wire, tied solid at each intersection. (No. 7 wire, see above).
FILLER SPACING — 1¾″ to 6″. See illustration this page.
HOOK HANGERS — To fit steel posts, wood or tile walls as specified.
FARROW RAILS — 1⅛″ O. D. steel pipe, designed to fold up flat against partition.
F. R. BRACKET — Folds up and is locked flat against partition when not in use.
FINISH — All pen equipment heavily electro-galv. Castings hot dip galv.



Folding Farrow Rails



Rails on partition fastened up out of the way when not needed.

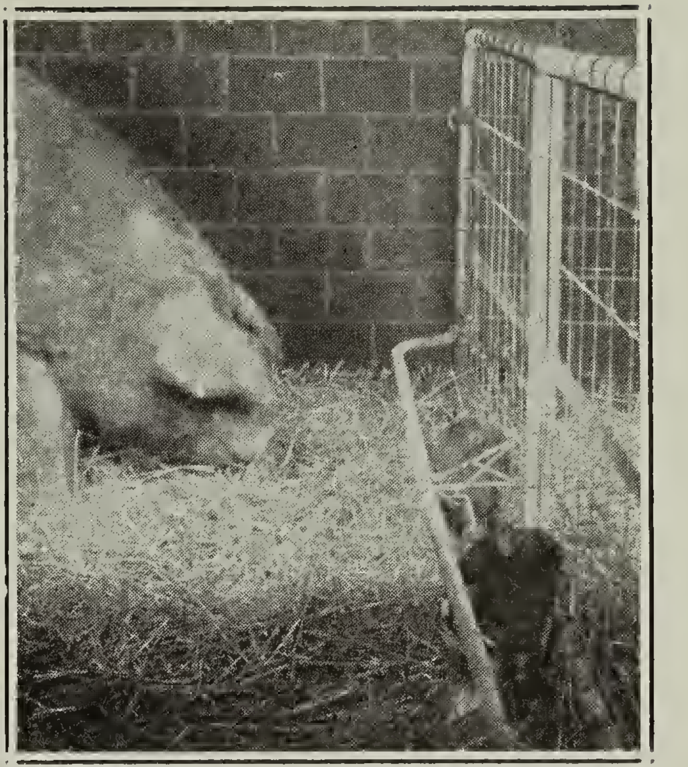


Rails down. Held by simple strong device.

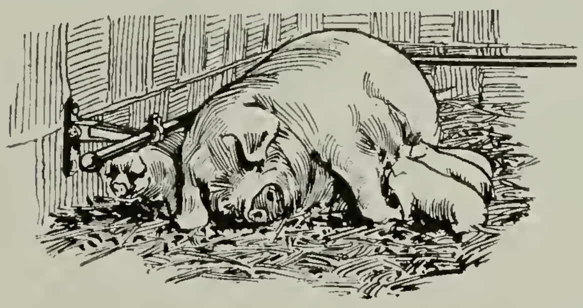
How Pigs Are Lost Before Weaning Time

Total Loss is 24.95%
How This Loss Occurs

1	Overlaid by sows	29.13%
2	Farrowed weak	22.34%
3	Farrowed dead	15.88%
4	Chilled	10.09%
5	Eaten by sows	4.59%
6	Aborted	4.55%
7	Scours	3.48%
8	Thumps	1.78%
9	Necrobacillosis	1.56%
10	Cholera	1.01%
11	Miscellaneous	5.64%
		100.00%

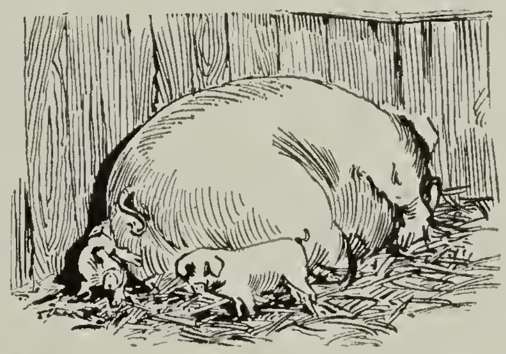


Out of every 100 pigs farrowed, 25 of them die before weaning. Note that the number of pigs dying from disease up to weaning time is small compared to number overlaid. Most of this great loss is easily preventable and bigger profits made by use of CLAY Farrow Rails.



This One Goes to Market

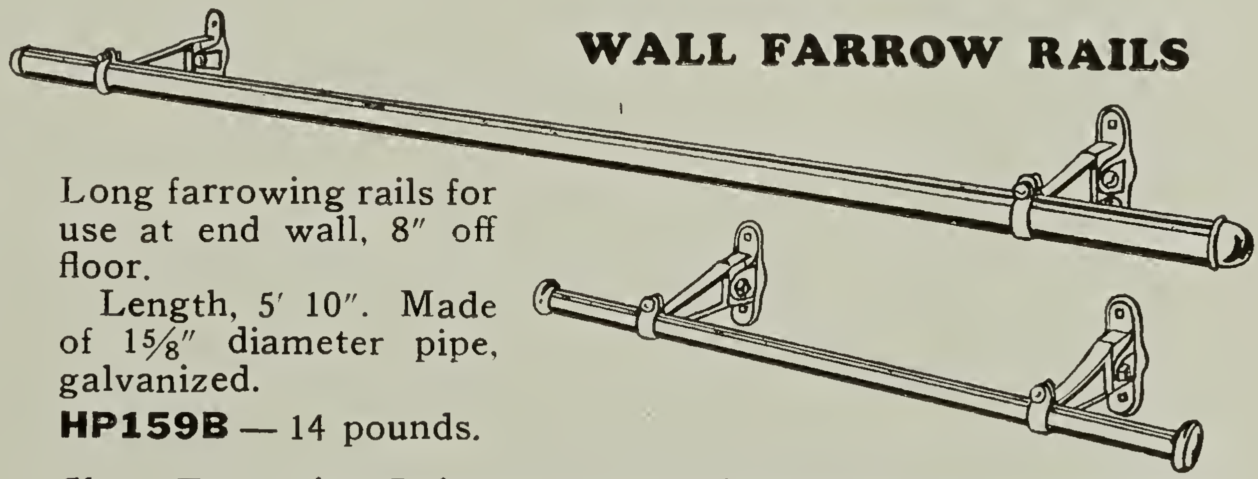
Many a little pig owes its life to CLAY farrow rails. Many extra dollars have been made possible due to these life savers. Equip your pens with CLAY Farrow Rails and save the little pigs.

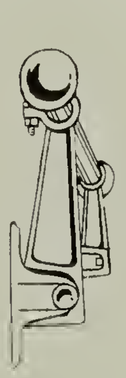


Another Pig Killed

More little pigs are killed each year by sows overlaying than from any other cause. This loss runs into millions of dollars each year. How many pigs do you lose?

WALL FARROW RAILS





Folded Up

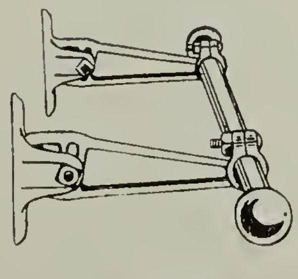
Long farrowing rails for use at end wall, 8″ off floor.

Length, 5′ 10″. Made of 1⅝″ diameter pipe, galvanized.

HP159B — 14 pounds.

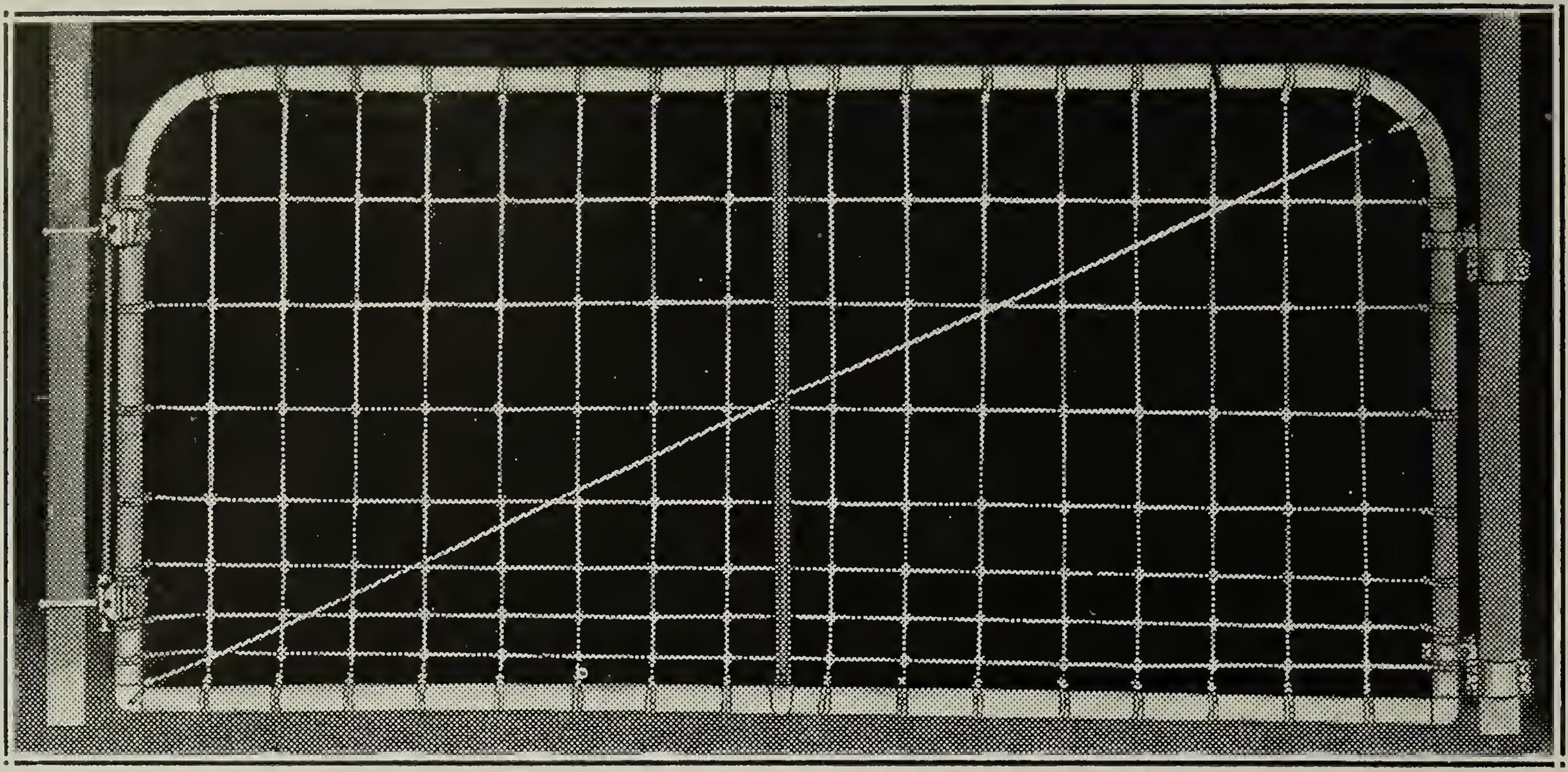
Short Farrowing Rails for use on side walls next to small doorways, 8″ off floor.

Length, 2′ 6″. Made of $1\frac{1}{16}''$ diameter pipe, electro galvanized finish. Castings hot dip galvanized. Has two lock and brace castings of best grade malleable. Easily operated by hand, yet hogs cannot loosen them.



Fastened Down

HP159A — Short Rails, 2′ 6″. Weight, 7 pounds.



Plain Front Gate

Illustration shows latch and hinges for steel posts — see below, fittings for wood posts. Standard length, 6′ 8″ center to center of 2″ steel posts or 6′ 8″ center to center of 4x4 wood posts. For wood posts 4″x 4″, gates are slightly shorter, allowing for latch and angle bar.

HP144 — Front Gate for Steel Posts, 47 lbs.
HP145 — Front Gate for Wood Posts, 47 lbs. (Odd length or extra length, per foot, extra)
HP162 — Pig Creep (not illustrated) 5 lbs.

Illustration shows No. 9 wire wrapped joints, at slight cost we can supply No. 7 wire welded joints.

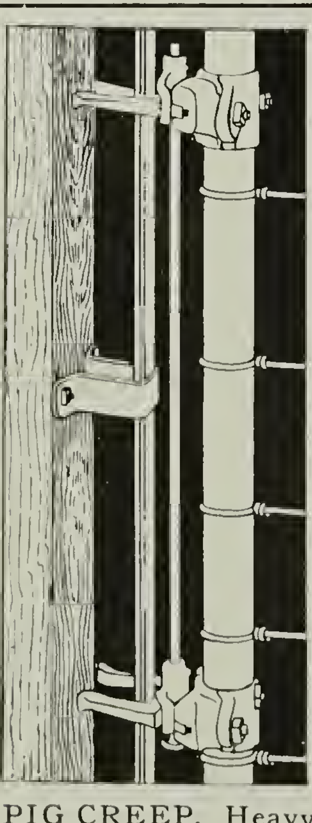
If Your Hog House is NOT Built

1. Decide on the number of sows to breed, considering the size of your farm and your system of management.
2. Study the location of proposed hog house to see if it should run North and South or East and West.
3. Send to us for blue prints and plans to meet your requirements, which are sent on approval.

If Your Hog House IS Built

Send us a pencil plan of the floor of your hog house. Be sure and show inside width and length—show size of posts and distance between posts and wall, and from post to post.

State whether you can move posts to fit standard size pens or shall we figure special sizes to fit posts as now set?

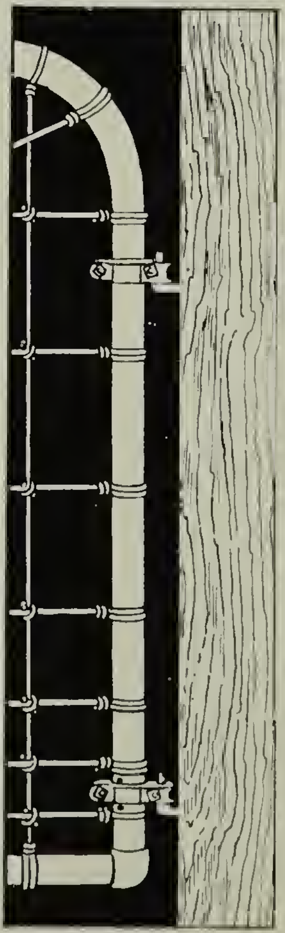


CLAY Pens permit ALL the sunshine entering the hog house to reach the floor, walls and little pigs regardless of sun's angle which is not true of wood or even all-pipe pens.

CLAY Hog Pens cost little more than wood but are permanent and sanitary.

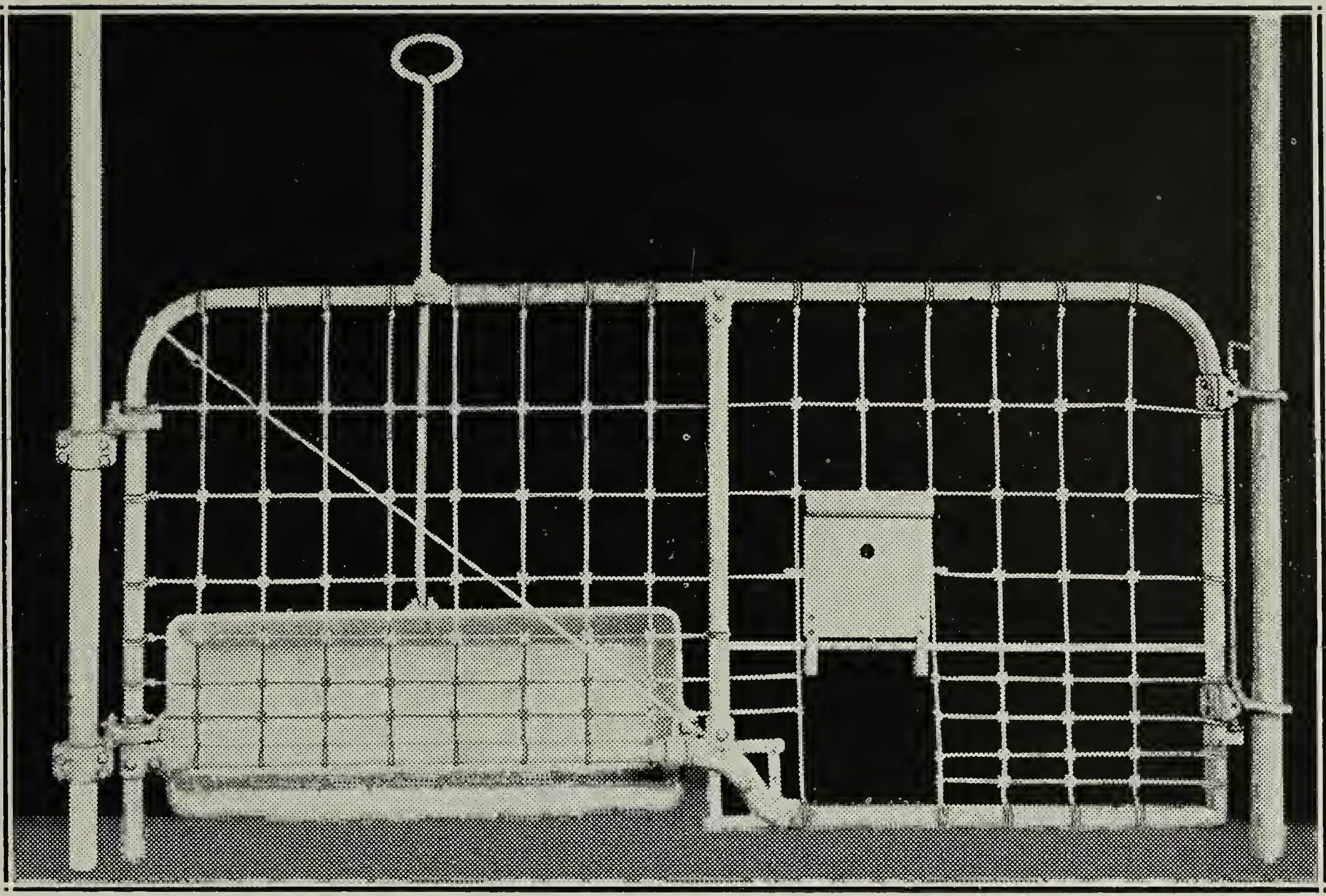
SPECIFICATIONS

HEIGHT: 3′ 3″.
LENGTH: 6′ 8″ center to center of steel posts or 4x4 wood posts.
GATE FRAME: $1\frac{5}{16}$″ O. D. Steel Pipe.
VERTICAL BRACE: 2 piece ¾″ Angle Steel securely bolted.
FILLER: All No. 9 wire, securely tied at each intersection.
At a slight extra charge we can supply No. 7 wire welded joints.
LATCH: Double Automatic CLAY Latch.
FITTINGS: Double bolted, malleable, or Screw Hooks for wood posts.
FINISH: Heavy electro-galvanized, castings hot dip galvanized.



PIG CREEP. Heavy galvanized sheet steel, hinged at top to swing, hook up or lock down, size opening, 9″x 12″.

FILLER SPACING: 1¾″ to 6″ see illustration page 130.



Combination Front Gate and Cast Iron Trough

This front gate is a combination of our plain front gate and tilting cast iron trough. The formed bottom bar is one continuous piece and supports the trough.

The trough is cast iron and easily raised for cleaning or lowered by means of the iron arm above. This feature is clearly shown in the illustration on this page. As the trough protrudes 5 in. from the cross bar, the feed is easily poured from outside of pen without interference from hogs.

The diagonal brace is No. 8 galvanized steel wire, and makes it impossible for this gate to sag.

Illustration shows No. 9 wire wrapped joints we can supply at slight extra cost. No. 7 wire with welded joints.

FINISH: Pipe frame electro galvanized, hot dip galvanizing on castings, trough painted.

Illustration shows latch and hinges for steel posts, fittings for wood post page 126.

Standard Length. 6 ft. 8 in. c. to c. of 2 in. steel post or 4x4 wood posts.

HP146 — Combination front gate and cast trough for steel post, 115 lbs.

HP147 — Same for wood posts, 115 lbs.

HP162 — Pig Creeps, 5 lbs.

Odd lengths or longer lengths, per foot, extra.

(Creep supplied only when ordered.)

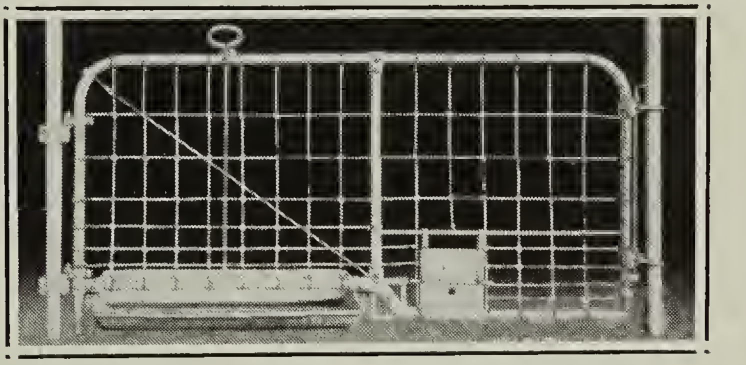


Illustration shows trough and pig creep down.

SPECIFICATIONS

HEIGHT: 3 ft. 3 in.

LENGTH: 6 ft. 8 in. c. to c. of 2 in. post or 4x4 wood posts.

FRAME: $1\frac{5}{16}''$ O. D. high carbon steel tubing.

VERTICAL BRACE: $1\frac{5}{16}''$ O. D. steel tubing.

FITTINGS: Double bolted malleable.

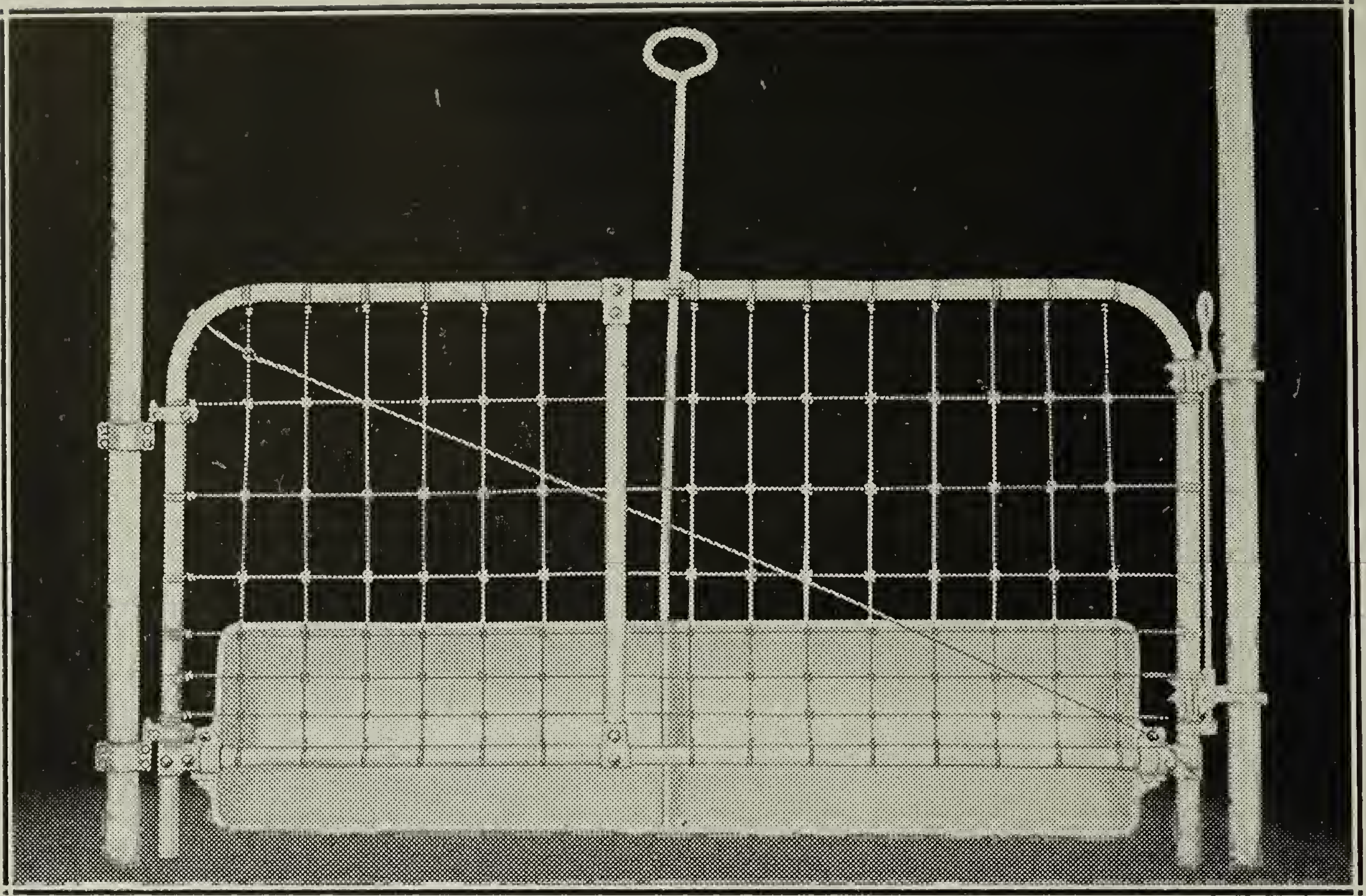
FILLER: All No. 9 wire securely locked on pipe.

LATCH: Double Automatic.

TROUGH: Cast iron 36 in. long, 14 in. wide, 4½ in. deep.

PIG CREEP: Galvanized sheet steel hinged at top to swing. hooked up or locked down. Size opening 9x12 in.

FILLER SPACING: 1¾ in. to 6 in. see page 108.



Combined Gate and Double Length Trough

Cast iron trough is heavy and substantial. It swings with the gate. Illustration shows trough tilted for easy cleaning.

Illustrating steel post hinges and latch. Fittings for wood page 126.

Standard Length: 6 ft. 8 in. center to center of 2 in. steel posts.

This gate only supplied in this standard length.

This construction offers double feeding capacity, thus when several hogs occupy the pen the long trough eliminates crowding at feeding time. The trough is divided in the middle for feeding one sow per pen. As the trough protrudes 5 in. from the cross bar the feed is easily poured in from the outside of the pen without interference.

FINISH: Frame electro galvanized, castings hot dip galvanized.

The long trough is easily tilted for cleaning. Screw knob holds arm tight in raised position allowing greater pen room and also for rinsing and cleaning. Screw knob locks trough down so pigs can't root it up.

HP150 — Gate and Cast Trough for steel posts.

No. 7 wire welded joints can be supplied at slight increase in cost.

SPECIFICATIONS

HEIGHT: 3 ft. 3 in.

LENGTH: 6′ 8″ center to center 2″ steel post.

FRAME: $1\frac{5}{16}$″ O. D. high carbon steel tubing.

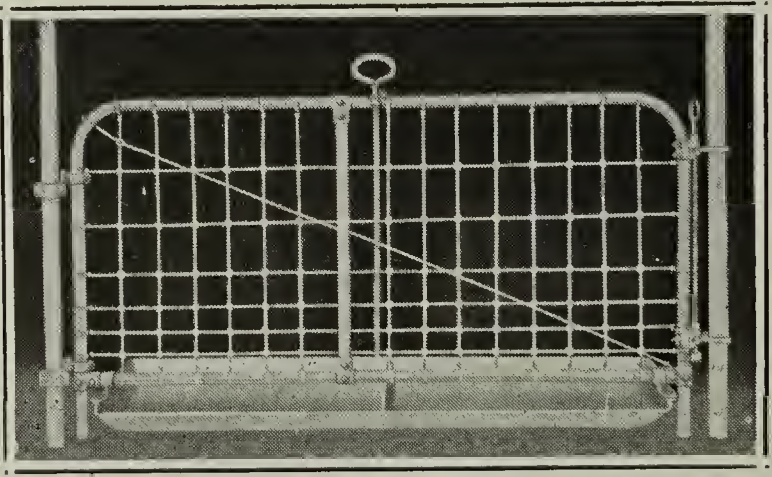
VERTICAL BRACE: $1\frac{5}{16}$″ O. D. steel tubing.

CASTINGS: Double bolted malleable.

FILLER: All No. 9 wire securely locked at each intersection.

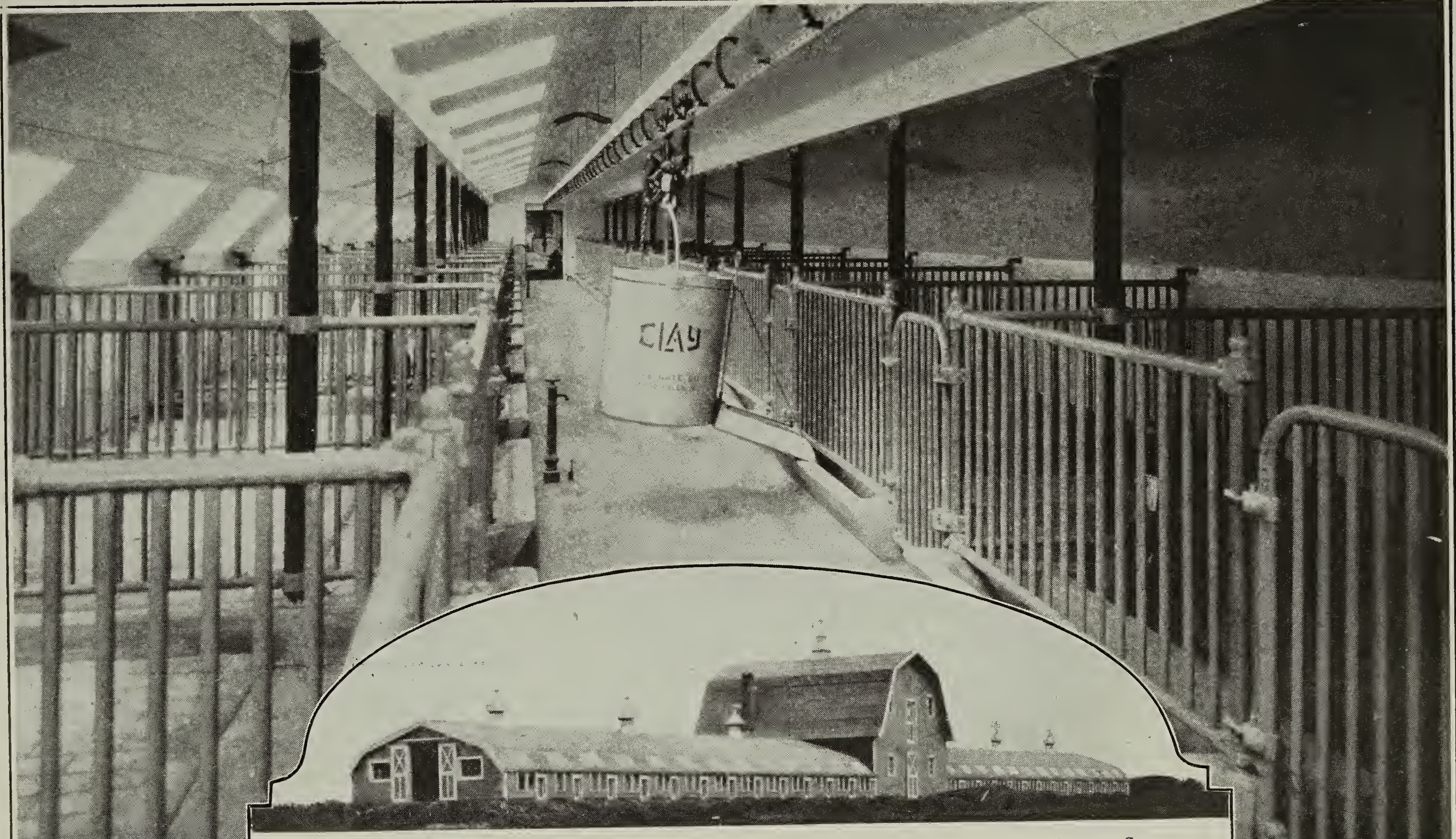
HINGES: To fit steel posts. Hinges for wood post can be supplied.

TROUGH: Cast iron 5′ 8″ long, 14 in. wide, 4½ in. deep.



Cast Iron Troughs Are Best

Troughs used for fifteen years at Iowa Experimental Station are still good today, their herdsman said, "I have tried tin troughs and they rusted out, I tried wood troughs and they got sour and all rotted out. I have tried cement troughs and they cracked and crumbled, they are all gone but these faithful cast iron troughs are here."



Hog House, prison farm, Detroit, Mich. Equipment planned and supplied by Clay Equipment Corp. Large picture merely shows one end of house. There are four large hog houses.

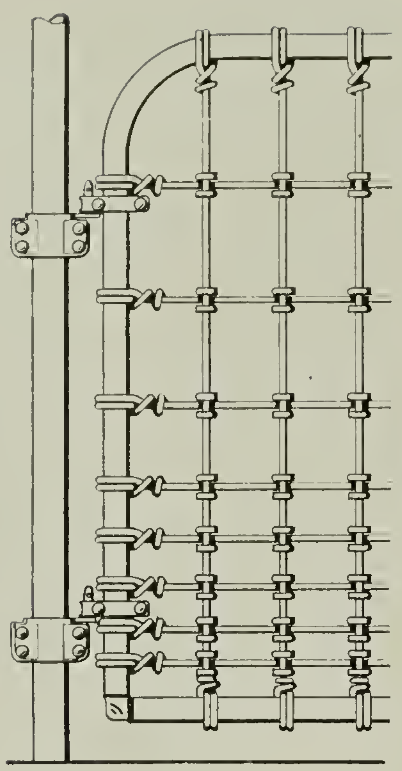
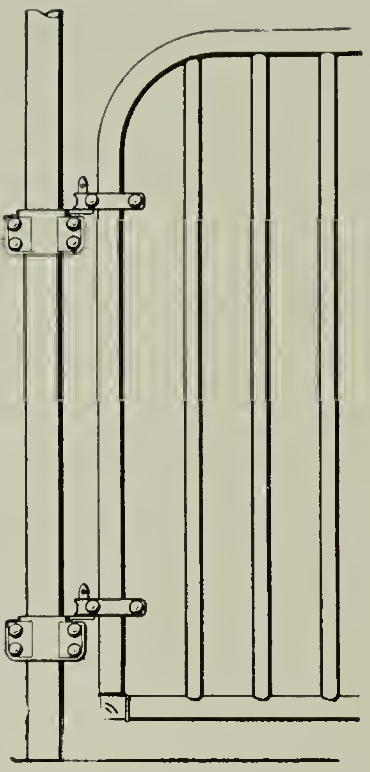
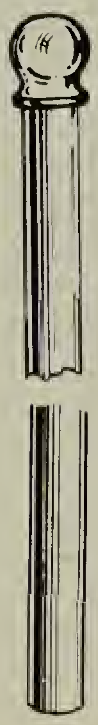


Illustration shows No. 9 wire wrapped joints. At slight increase in cost we can supply No. 7 wire welded joints





Wire Filler

All wire is No. 9 galvanized. Vertical wires spaced 4 inches apart. Lateral wires spaced 1¾ to 6¼ inches apart. (See page 92.) Wires are double wrapped around 1$\frac{5}{16}$ inch O. D. frame.

⅞″ Pipe Filler

Spindles spaced to leave opening approximately 2¼″. For feed pens where small pigs are not raised, openings 4 to 4½″ are suitable and special prices apply.

Short Hog Pen Posts

For use at corners of hog pens. 1.9″ O. D. with ball cap.

Long posts used to support roof. Flat caps to fit.

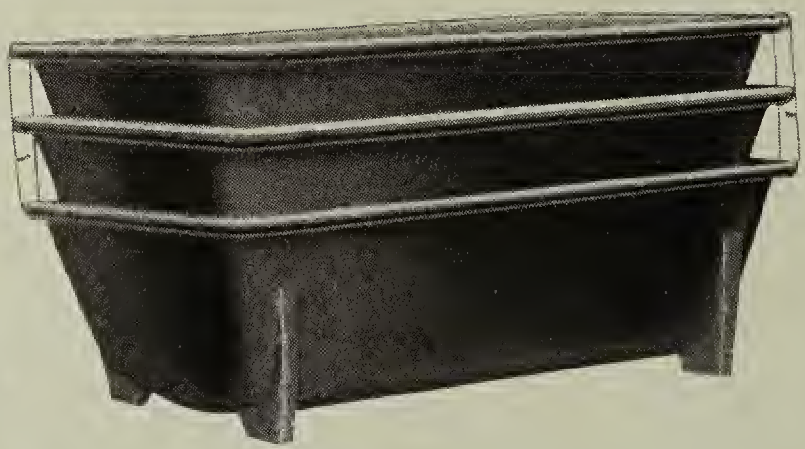
HP156 — Corner Post and Ball Cap — 11 lbs.

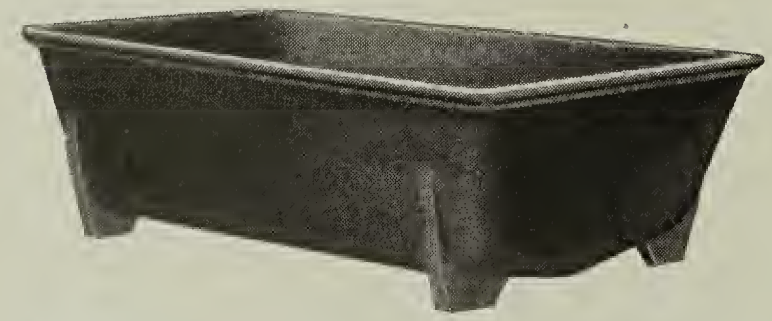
HP157 — Roof Supporting Post (any length).

ME1.9 — Flat Cap.

Hog Troughs

For permanence and economy, the cast iron troughs have no equal. Troughs in use for seventeen years are just as good as the day they were bought. They never rust out. With rounded ends and bottom there are no corners for food to collect and decay.



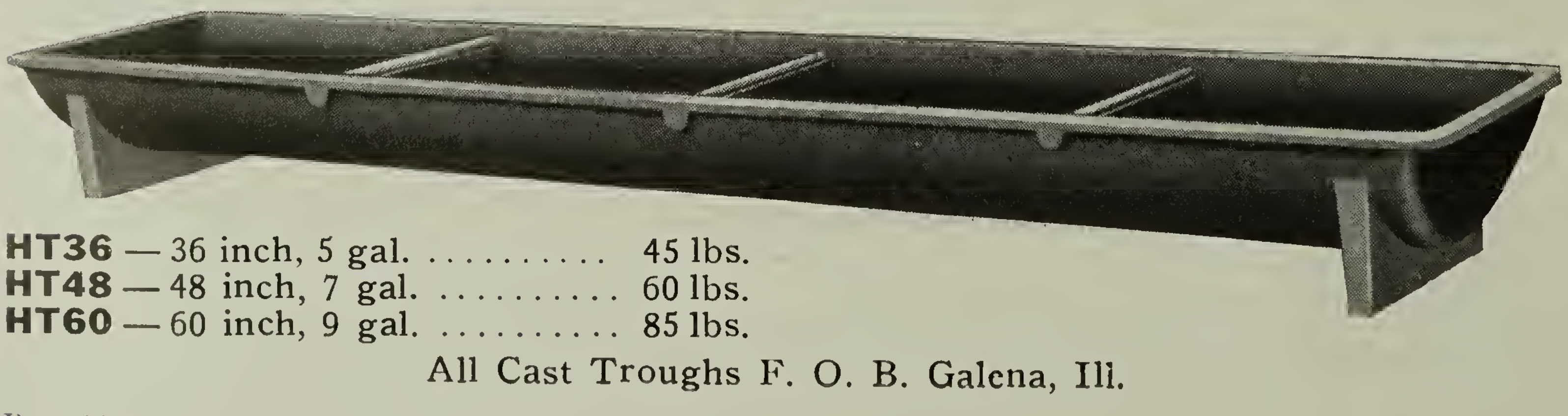


HT18 — 18 inches long, 12 inches wide, 4½ inches deep, capacity 3 gal., 20 lbs. (Nests of three.)

The HT18 and HT24 troughs nested as shown above earn a very substantial reduction in freight rate compared to the usual galvanized trough that does not nest.

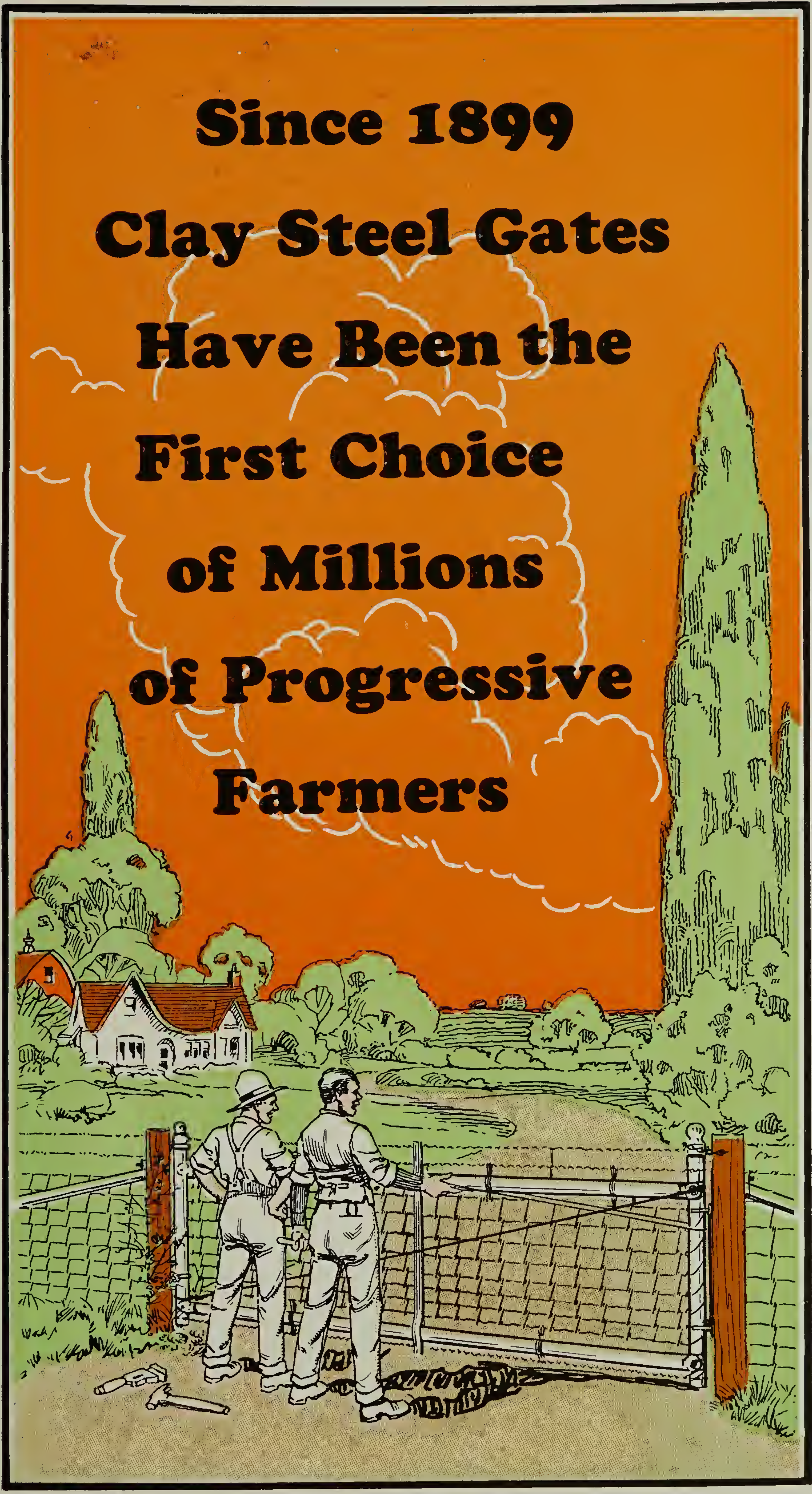
Troughs nested for shipment take third class rate. (Nests of three.)

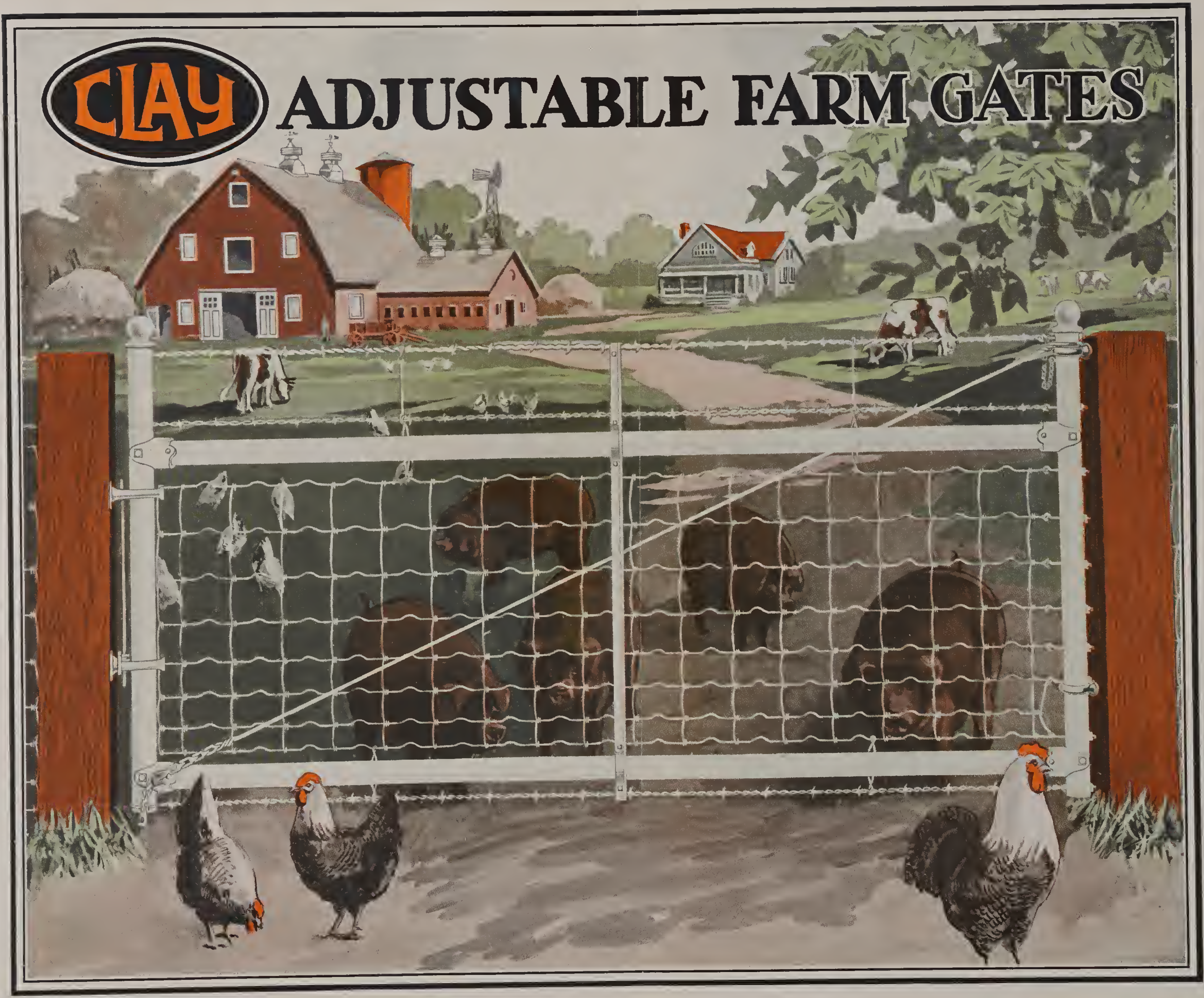
HT24 — 24 inch troughs, 4 gallons, 28 lbs.



HT36 — 36 inch, 5 gal.	45 lbs.
HT48 — 48 inch, 7 gal.	60 lbs.
HT60 — 60 inch, 9 gal.	85 lbs.

All Cast Troughs F. O. B. Galena, Ill.


Since 1899
Clay Steel Gates
Have Been the
First Choice
of Millions
of Progressive
Farmers


CLAY
ADJUSTABLE FARM GATES

Unlimited Guarantee for Three Years

If any CLAY gates, style E, EP, or K, are damaged from any cause within three years from date of purchase, we will replace the damaged parts or the entire gate if necessary, without cost to purchaser.

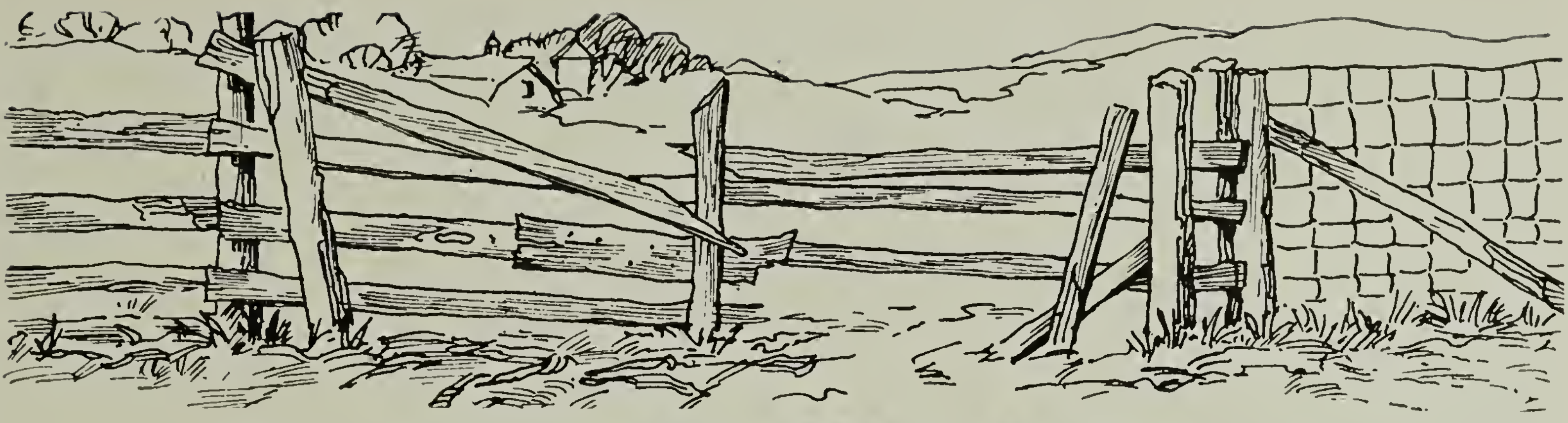
(Signed) JOS. B. CLAY, Pres.

The leader in any field of endeavor always pays the price of leadership. Imitators are quick to follow the blazed trail and thus pay tribute — the sincerest flattery — to the one who is showing the way.

Imitators invariably cheapen a product, beyond the point of substantial construction and satisfactory service.

Thus honest dealers and unwary farmers are misled by price teasers.

Since 1899 the CLAY EQUIPMENT CORP. has never swerved from its rigid standards of quality of material, proper design, and high class workmanship, which have made the above guarantee possible.



Replace the Weak Links

NO fixture on the farm is used so many times a day, and so many days in the year as the gate. A large percentage of the profits from farming leaks out through ramshackle gates. Many a crop has been seriously damaged by stock gaining access to it through makeshift gates.

A farmer's character and standing can be accurately judged by the fences and gates on his farm. More than any other class of fixtures they are seen by the public. Most of the boys who have left farm homes have passed off the parental soil through miserable gates. A stranger or hired man using a gate that is rickety, heavy and hard to open, usually yields to the temptation to leave it open.

Flimsy gates costing a few dollars must be replaced every few years, while good steel gates, capable of efficient service for much greater periods, last indefinitely.

Increase the Value of Your Farm

A farm with poor gates offered for sale at $10,000, for example, will often sell readily, with $100 invested in modern gates, for $11,000. Farms on which dilapidated gates are used seldom bring their full value when sold. One of the most detestable features of driving or riding over farms consists in opening and closing dragging, mud-clogged, unsightly gates.

Neighborhood disputes, animosities and serious altercations are fostered by the gates commonly used on American farms. Stock-farmers above all others realize the importance of gates that will do reliable duty all the time and everywhere. Where pure-bred stock is maintained it is reckless extravagance to use doubtful gates.

Protect Your Fancy Stock

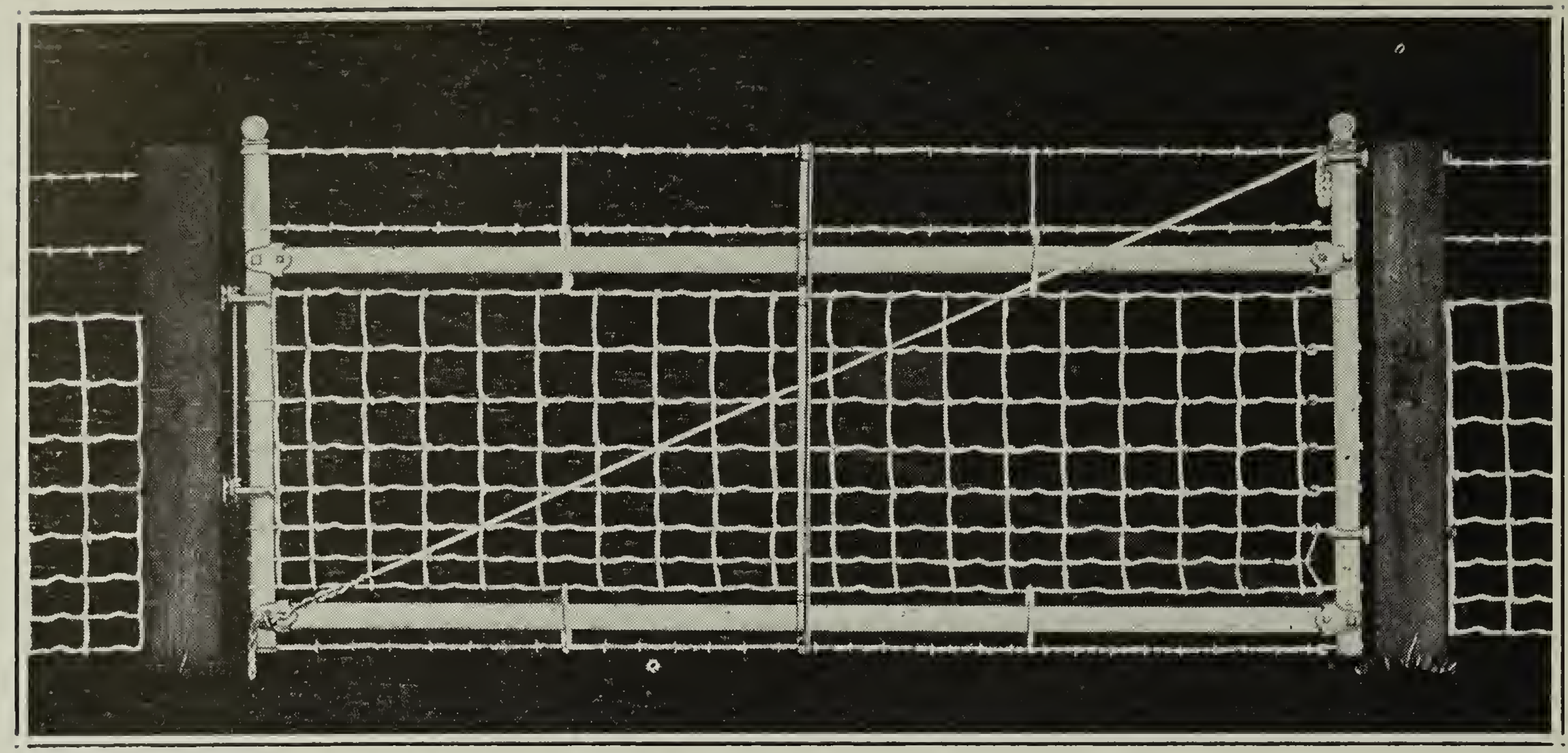
Live stock breeders cannot afford to risk poorly constructed gates that are easily wrecked. The breeder whose $300 purebred cow has been served by a scrub bull that made his way through an old patched-up gate has had his lesson.

"If" the gate had been shut, "if" it had been strong on its job, "if" it had made good when the test came, "if" it had been a respectable farm gate instead of an eye-sore and an impotent excuse, this accident or that would not have occurred.

One of the virtues of a good farm gate is the quickness with which it may be opened and shut. This is a fast age. We do things in a hurry. A poor gate is the "weakest link" in a fence. Sometimes the link is so antiquated and weak that it is practically missing. Whatever is built should have lasting qualities. Neat, smooth-working, stock resisting steel gates are a sound investment. This is experience.

Steel has seen more marked improvements in the last few years than any other commodity. Instead of the old, soft, quick-rusting product of a few years ago, we now have a high carbon, spring-like steel that is ideal for such uses as it is put to in a modern farm gate. It has strength —spring — and resistance to rust that is surprising. This modern product is to be found in all CLAY gates.

With Clay Steel Gates



"E" Adjustable Galvanized Farm Gate

A MILLION users can testify to the remarkable service of CLAY galvanized guaranteed steel gates. Sons are using gates purchased by their fathers twenty-five years ago. With the exception of the style K, there is no gate equal to it in strength and lasting qualities. A special grade of steel tubing explained on page 137 accounts for its remarkable resistance to twisting or breakage. Don't make the mistake of buying other gates claimed as good.

Page 135 also illustrates the raise feature at the hinge end and the tilting at the latch end of our four Adjustable gates; 'E' galvanized, 'E' painted, 'K' galvanized and 'H' painted.

Unlimited Guarantee for Three Years

If Clay gates are damaged from any cause within three years from date of purchase we will replace the damaged parts or the entire gate if necessary, without cost to purchaser.

(Signed) JOS. B. CLAY, Pres.

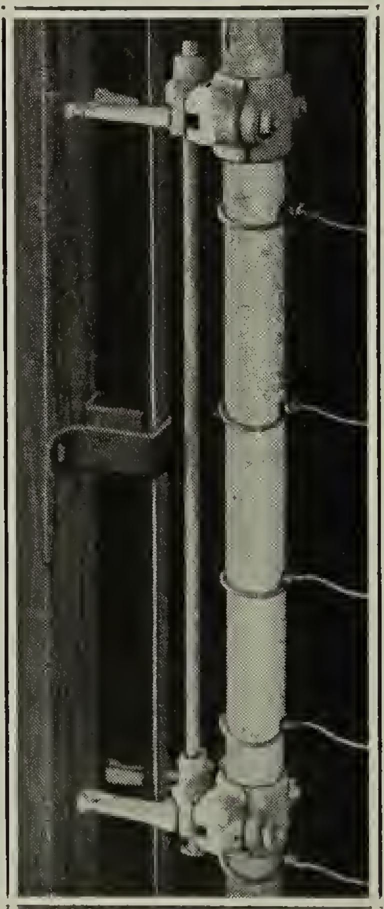
All E gates 54″ high.

E 8-54	— 8 ft.	70 lbs.
E10-54	— 10 ft.	80 lbs.
E12-54	— 12 ft.	95 lbs.
E14-54	— 14 ft.	105 lbs.
E16-54	— 16 ft.	115 lbs.

Latches for steel posts can be supplied. See page 143. This gate not built higher than 5′.

Specifications

FRAME: 1⅝″ O. D., heavy weight, high carbon structural steel tubing. (See No. 1 and 2, page 137.)
FABRIC: American 6-in. stay, all No. 9 galvanized wire.
BARB WIRE: 2 strands of No. 12 barb wire.
FITTINGS: Extra quality malleable and stamped steel.
CENTER BRACE: 2 pcs., ¾ x ¾ x ⅛-in. angle hot forged steel.
LATCH: Double automatic, operates from either side.
HINGES: ⅝-in. round, high carbon steel, 10-in. shank.
TILTING OR RAISE: Raise from 24 to 36 inches
END PIPE: Slides up through hinges 6 inches.
STRETCHERS: Lateral wires have 5/16-in. stretcher bolt.
FINISH: Electro galvanized 3-test coat.



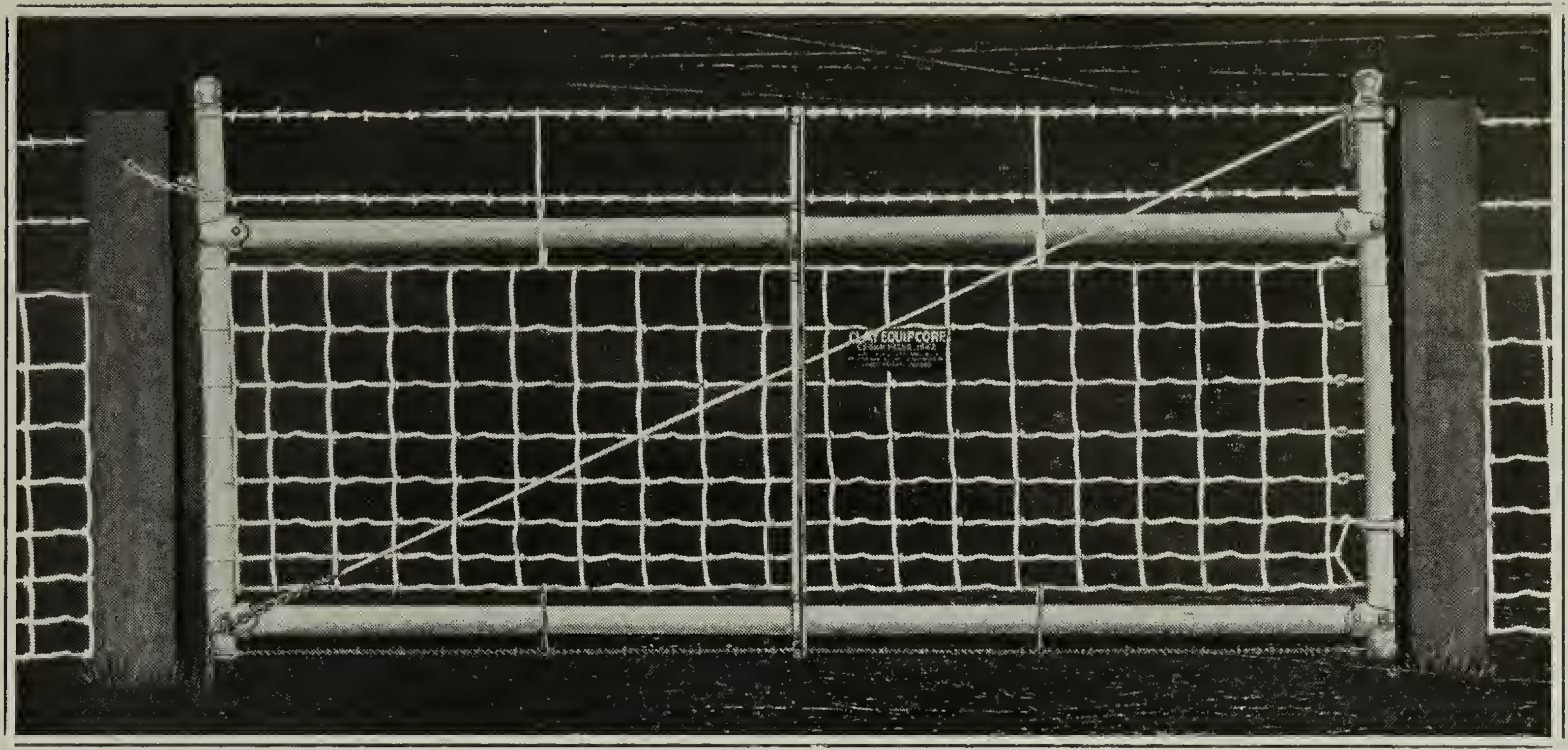
Latch on the Gate

Illustration shows the CLAY double latch mounted on gate to engage on angle steel latch bar on wood post.

This latch requires 2″ wider opening than above. May also be applied on style 'E' painted, style 'K' and similar patterns, but smaller on style 'P' gates.

Latch clamps firmly to gate frame. May be operated from either side of gate.

L11-9B — Double latch and bar, 7½ lbs.



"EP" Adjustable Painted Gate

THIS very practical farm gate is the same heavy frame construction as the style 'E' galvanized, page 134, excepting:

Galvanized chain latch in place of double automatic latch. Wire, fabric, the same spacing, top and bottom wires No. 9, intermediate wires No. 11. Finish, satin aluminum in place of galvanized.

This pattern of gate is also guaranteed without reservation for three years against damage from any cause. The astounding strength of the tubing that makes this warranty possible is fully explained on page 137.

Same Heavy Frame as "E" Gate

EP gates all 54 inches high.

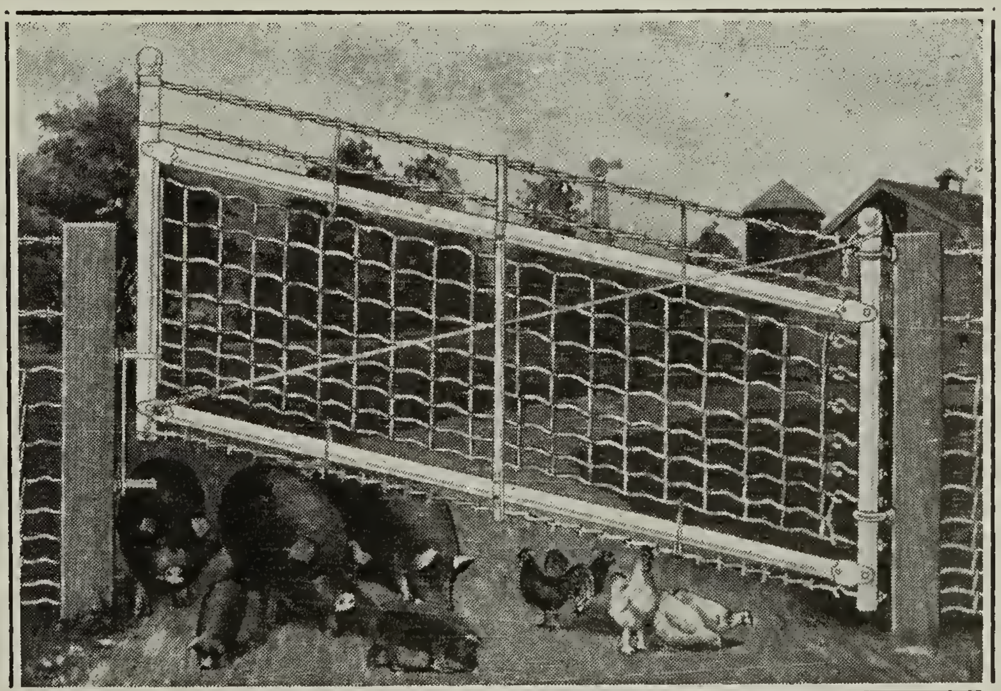
EP 8-54	— 8 ft.	65 lbs.
EP10-54	— 10 ft.	75 lbs.
EP12-54	— 12 ft.	90 lbs.
EP14-54	— 14 ft.	100 lbs.
EP16-54	— 16 ft.	110 lbs.

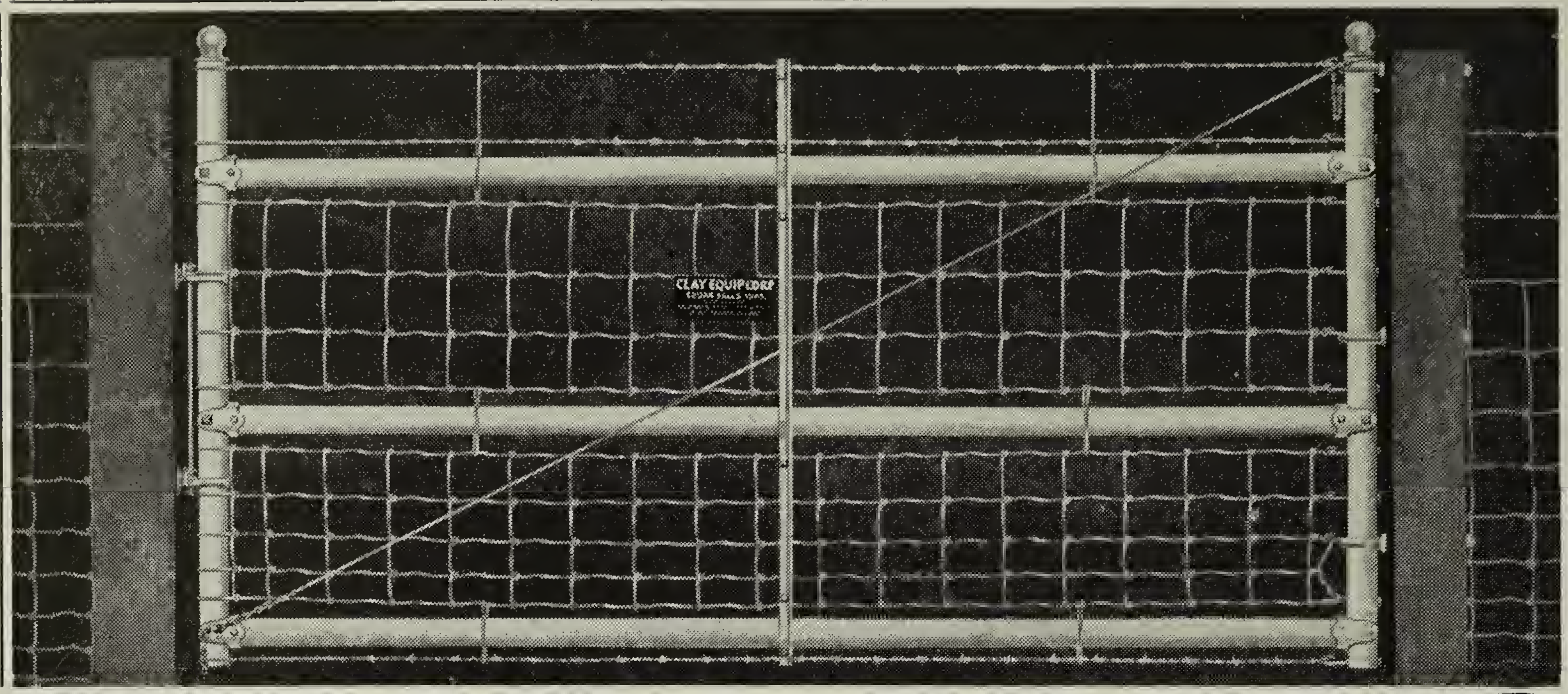
Hinges and latches for steel posts can be supplied. See page 143. This gate not built higher than 5′.

Catalog numbers on gates indicate: the first figures width of opening in feet, the second figures the height in inches.

Adjustable Feature

This is a great convenience. The entire gate may be raised and kept level by lifting at hinge end. The outer end may be tilted as illustrated here. The gate swings level in any position. A device handy to pass small stock. Raising the gates keeps the bottom from freezing down in winter months. This gate will never sag or drag on the ground. If the post leans hitch up the gate. Makes it easier to fit the gate to any gateway, a similar raising device used on the style 'E' galvanized, style 'K' galvanized and 'H' painted gates.





"K" Adjustable Galv. Bull Gate

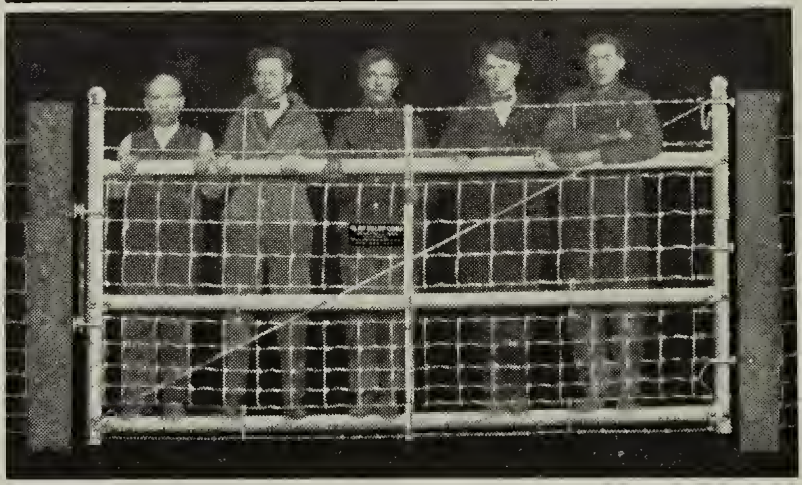
THIS is the strongest and heaviest steel farm gate on the market. We don't attempt to give specifications as in all particulars they are the same as the style 'E' galvanized, page 134, excepting the difference in height and three horizontal bars and three hinges.

In stockades or corrals where wild horses are broken or fattening steers crowd this bull gate is needed. It makes the meanest bull respect its enclosure.

Unlimited Guarantee 3 Years

(See page 134)

This illustration graphically demonstrates five men mounted on one side of one of these bull gates without either twist or sag.

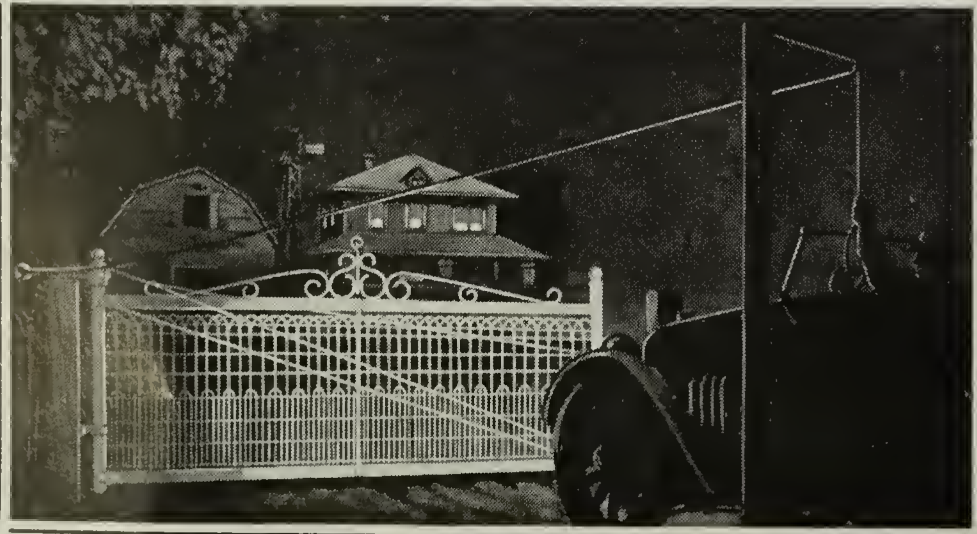


K10-60	— 10 ft. x 60 in.	115 lbs.
K12-60	— 12 ft. x 60 in.	125 lbs.
K14-60	— 14 ft. x 60 in.	135 lbs.
K16-60	— 16 ft. x 60 in.	140 lbs.

Hinges and latches for steel posts can be supplied, see page 143. This gate can be built 6″ or 12″ higher on special order.

Clay Automatic Gate Galv. Finish

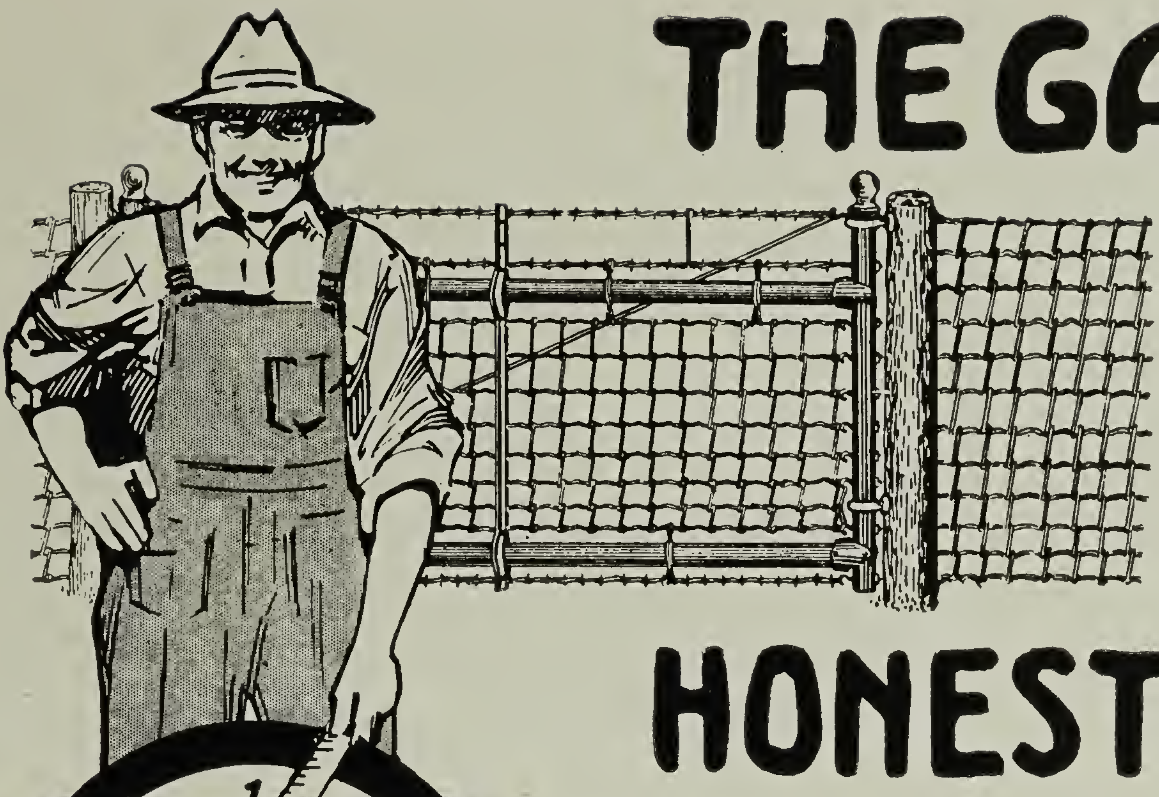
Genuine pleasure comes to the man who installs this gate at his front entrance. Consider the enjoyment of sitting undisturbed in your auto just home from town, barely stop and give the handle a little pull, the gate unlatches, swings clear open, stops and locks there almost magically, pass on through, another pull and it closes behind you, locks top and bottom secure and never fails. The frame construction the same as style 'E' galvanized. Fabric and scroll being different. Only furnished for wood posts, Hinge post, latch post and pull rope posts are not supplied with gate. All Auto. Gates 4½ ft. high.

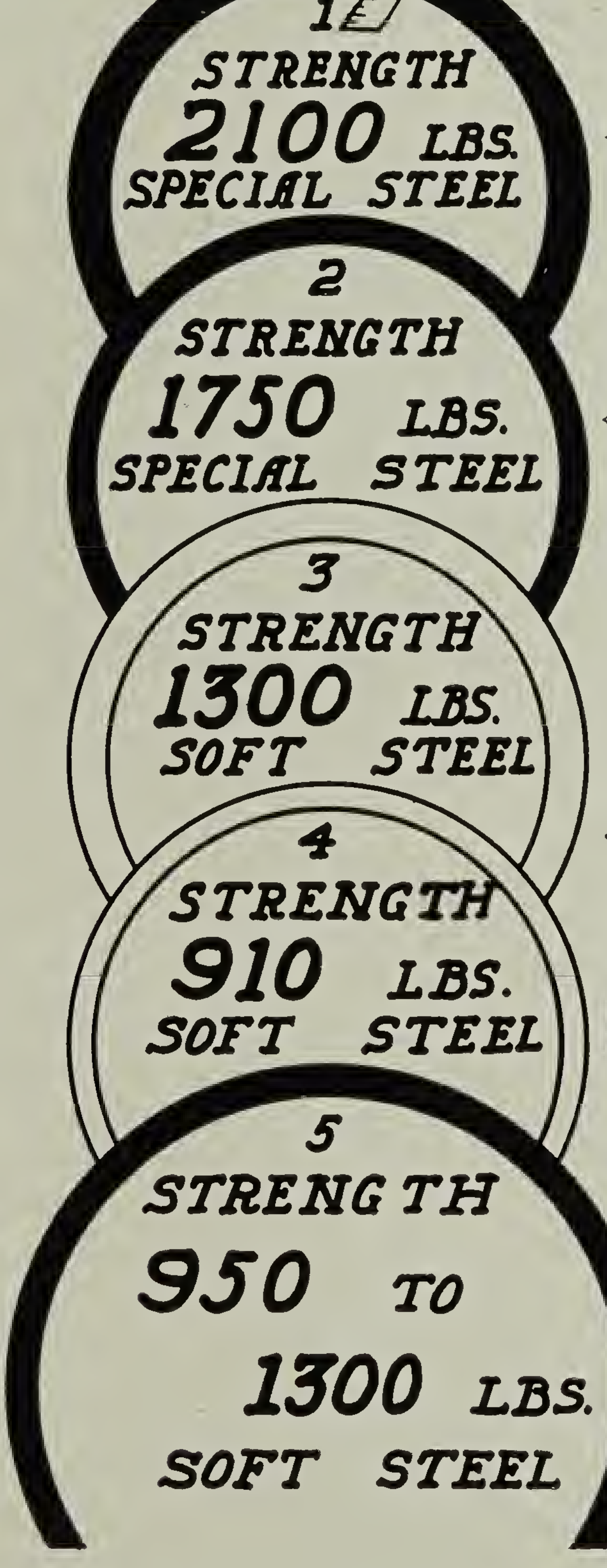


A10-54	— 10 ft.	105 lbs.
A12-54	— 12 ft.	120 lbs.
A14-54	— 14 ft.	130 lbs.
A16-44	— 16 ft.	140 lbs.

These gates can be supplied with plain fabric and without scroll.

THE GAUGE OF AN HONEST GATE





CLAY gates are built from a special quality of high carbon steel tubing. No. 1 the left, weighs 2¼ lbs. per foot and is used for the end posts.

No. 2 weighs 1.8 lbs. per foot and is used for horizontal pipe. This quality of tubing and thickness of wall is the secret back of our three year guarantee on 'E' gate galvanized, 'E' gate painted and 'K' gate galvanized.

Many other manufacturers use soft steel or welded seam pipe. That pipe is designed for water or heating purposes and even though full weight it is too soft to stand the abuse a farm gate receives. Observe the striking difference in strength. Pipe like No. 3 and No. 4 have never been used by this company in steel gates.

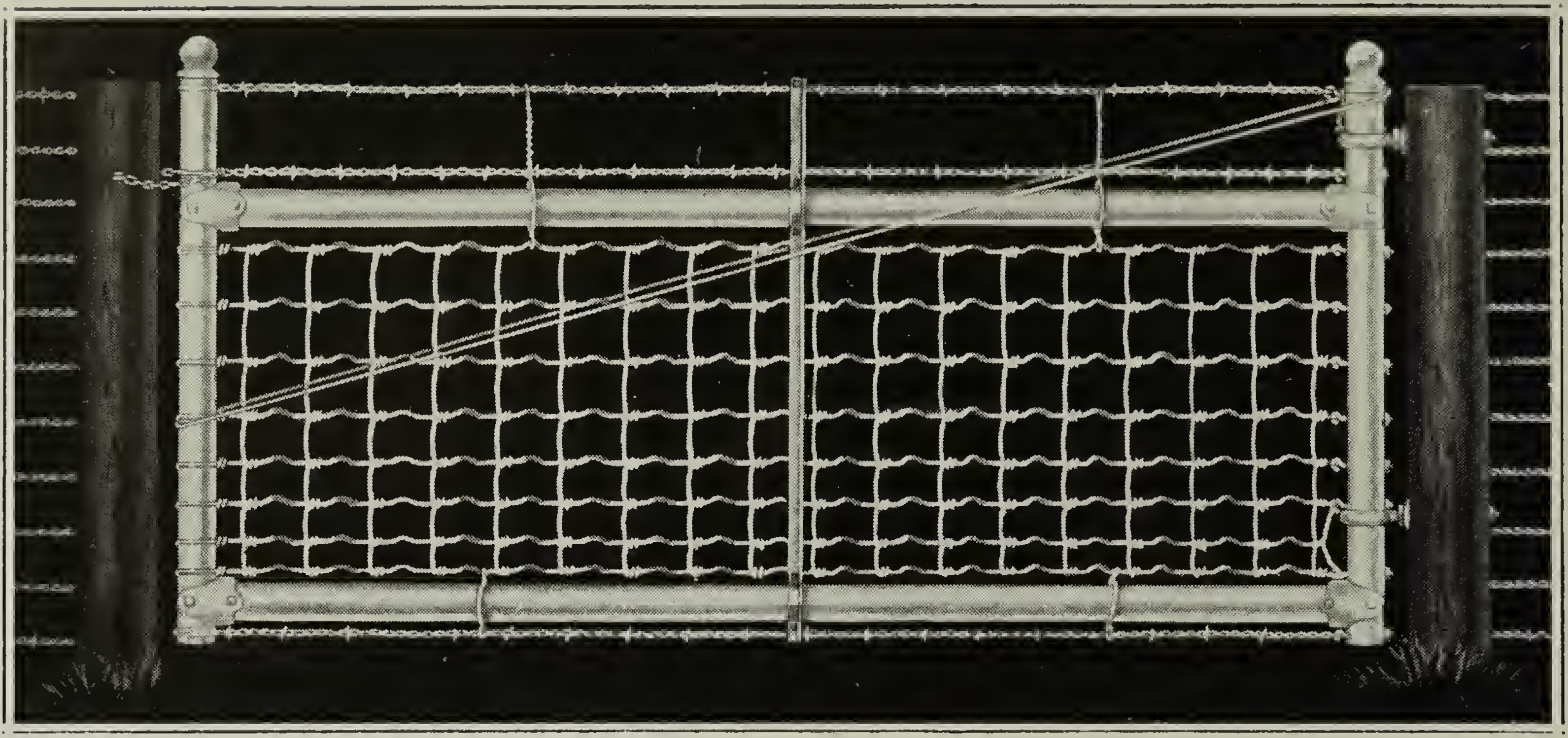
YOU should know the real facts about the strength of tubing used in steel farm gates. To the left five samples are pictured in the exact size and the weights shown are the fair average weight required to bend a piece of pipe 3′ 6″ long.

The tubing strength is the gauge of the value of the gate and nowhere else than in a CLAY gate will you find both proper quality of steel and the heavy thick wall of tubing.

A MILLION USERS attest the many years of satisfactory service CLAY gates will give you.

CLAY Flue Gates style H are offered with a reservation that they are constructed from reclaimed locomotive flues, diameter 2″ weight per foot varies from 1.9 lbs to 2¼ lbs. and the strength from 950 lbs. to 1300 lbs.

Certainly a better gate than the light weight soft steel pipe even though it is new. These gates are not guaranteed unreservedly for three years. PRICES ARE NOTICEABLY LOWER.



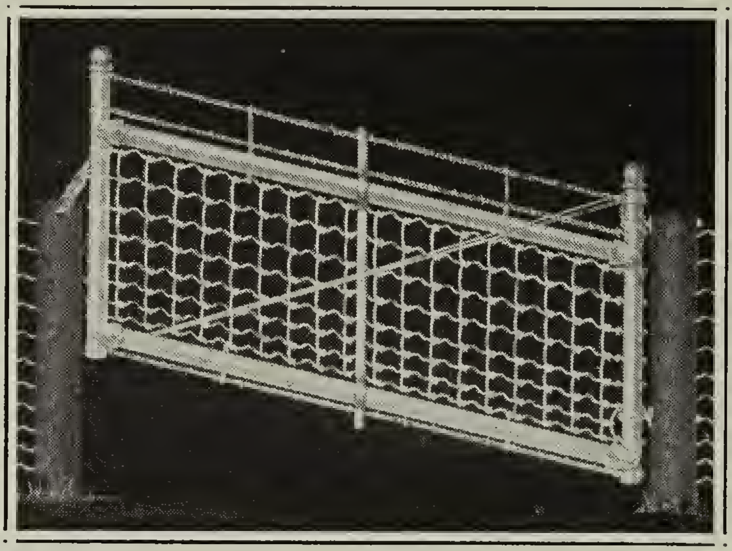
"H" Adjustable Painted Flue Gate

OUR style "H" fence gate has been on the market for 20 years. It is a thoroughly reliable and substantial article.

This gate is, however, manufactured from reclaimed locomotive flues 2″ in outside diameter and weighing from 1.9 lbs to 2¼ lbs. per foot.

The pipe is first thoroughly cleaned, then given a priming coat of rust inhibitive paint and finally a coat of aluminum.

This gate is sold not subject to our 3 year guarantee and is also subject to slight surface imperfections in the pipe.



Gates raised by brace wires placed lower on the outer end pipe

A HEAVY—BIG VALUE—GATE

SPECIFICATIONS

THE FRAME — 2″ and 2¼″ O. D. reclaimed locomotive flues cleaned and tested.
HINGES — ⅝″ heavy eye-bolt same as on style E gates.
FABRIC — No. 832 6″ stay, No. 9-11 American Hog Fence.
STRETCHER BOLTS — Galvanized on every lateral wire.
CORNER COUPLERS — Heavy malleable iron.
LATCH — Galvanized chain with snap hook.
ADJUSTABLE — Outer end to raise 20″, at hinge end 4″.
AUTOMATIC LATCH L10-9E can be supplied extra charge.

All H Gates 54″ high.

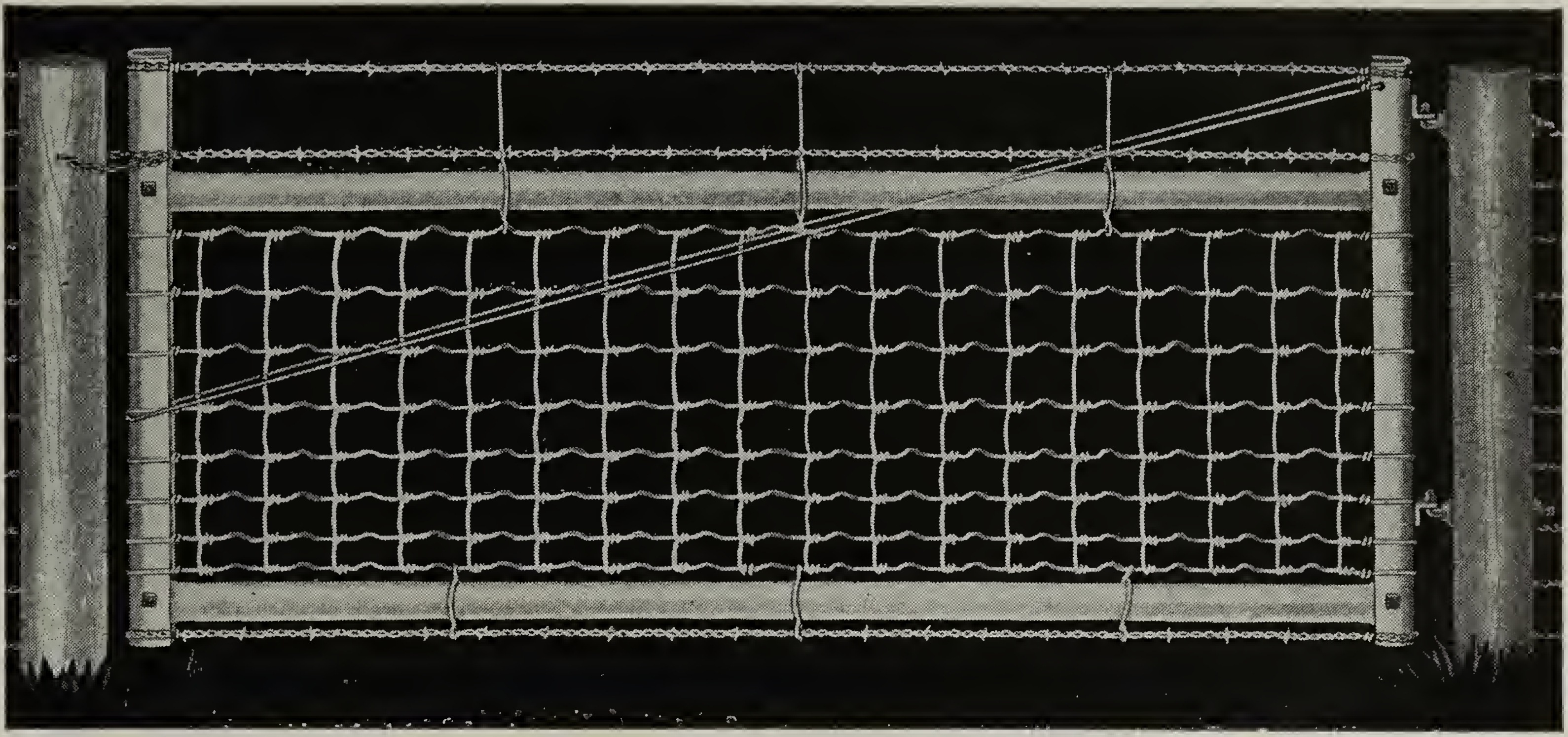
H10-54	— 10 ft.	85 lbs.
H12-54	— 12 ft.	95 lbs.
H14-54	— 14 ft.	105 lbs.
H16-54	— 16 ft.	115 lbs.

Not built higher than 5′.

Key to Gate Catalog Numbers

Letters indicate style.
First figure the width in feet.
Second figures height in inches.

Hinges and Latches for Steel Posts Can be Supplied. See Page 143

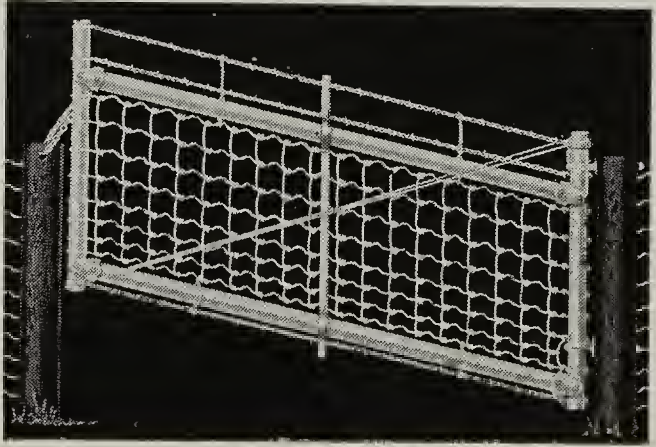


Clay "THRIFT" Gate

Backed by 30 Years' Experience Making 2½ Million Gates

IN 1899 the Iowa Gate Company (our former firm name) built the first All-Steel tilting Farm Gates, and since that time have offered the dealer trade various patterns to meet their trade demands.

In the CLAY THRIFT GATE we offer the greatest bargain in the history of this company—a 2-bar adjustable all-steel gate that you can retail at prices ridiculously low.



This illustration also shows the vertical center brace which can be supplied on the THRIFT GATE at a small extra cost.

SPECIFICATIONS

FRAME — Laterals are 2″ flues. The ends are new-steel U-bar.

ADJUSTABLE — The frame is hinged at the four corners so it may be tilted up or down, to clear snow or uneven ground.

HINGES — ⅝″ round special high carbon steel hook bolts with threads full length, and two nuts and two washers permitting proper mounting, even if post is not straight and plumb. Heavy eye is welded to the frame of the gate.

FINISH — 2 coats rust preventative red paint.

FABRIC — Is 832-6″ stay, 10-12½ hinge joint farm fence.

CHAIN — Is ample in length and with a handy hook.

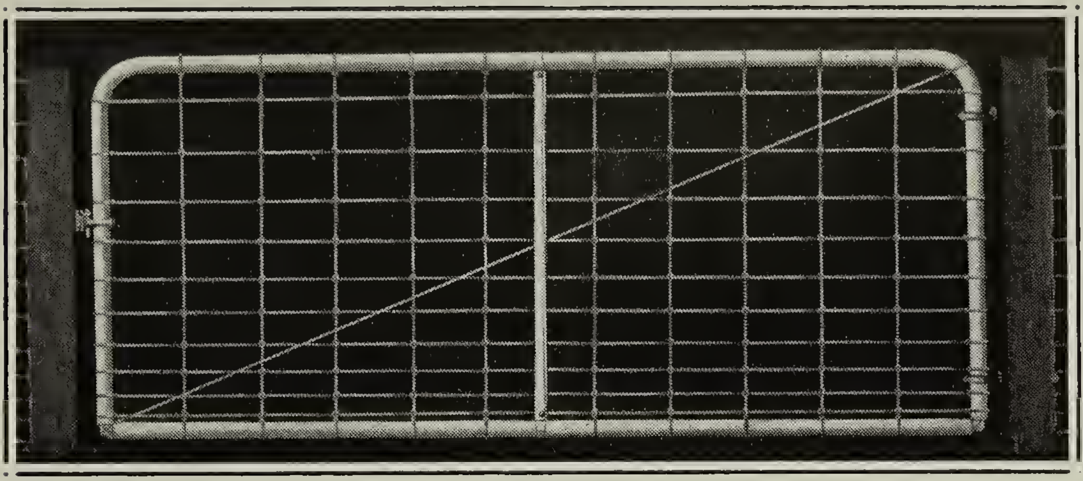
Sizes and Weights

10′ x 4½′	72 lbs.
12′ x 4½′	85 lbs.
14′ x 4½′	95 lbs.
16′ x 4½′	105 lbs.

Key to Gate Catalog Numbers

Letters indicate style.
First figure the width in feet.
Second figure height in feet.

Single Drive Gates



PS 8-48	— 8 ft. Square Mesh	50 lbs.
PS10-48	— 10 ft. Square Mesh	60 lbs.
PS12-48	— 12 ft. Square Mesh	70 lbs.
PS14-48	— 14 ft. Square Mesh	80 lbs.

Square Mesh

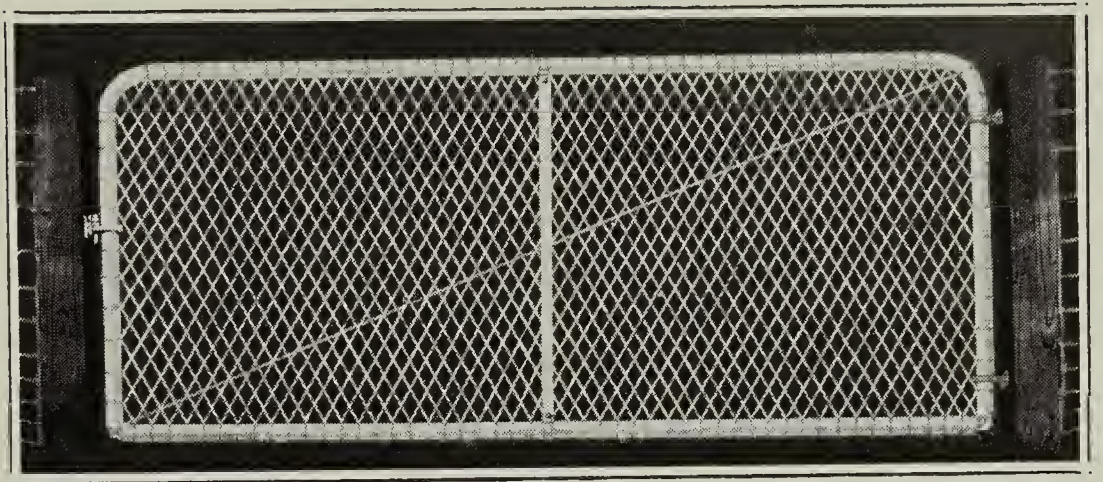
This single drive gate galvanized finish is very appropriate for gardens or lot enclosures where it is not subject to heavy use, but to keep stray stock out.

Gates can be supplied with hinges and latches for steel posts.

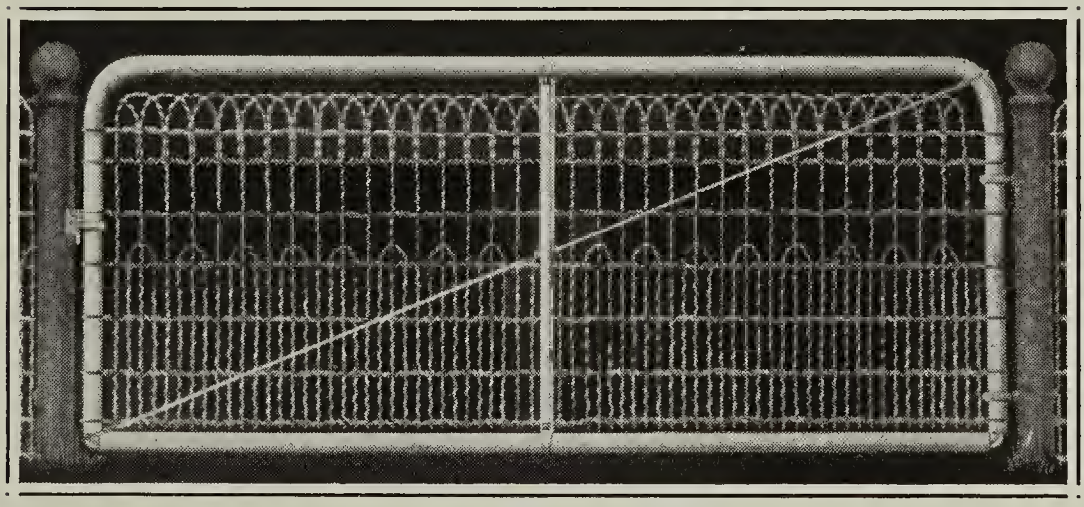
All three gates illustrated can be supplied with scroll top.

Diamond Mesh

This is the same style of frame, but covered with No. 13 diamond mesh wire securely tied on all four sides, suitable to keep poultry out of the garden, but for small chicks a different mesh, closer spaced at the bottom can be supplied on special order.



PD 8-48	— 8 ft. Diamond Mesh	53 lbs.
PD10-48	— 10 ft. Diamond Mesh	63 lbs.
PD12-48	— 12 ft. Diamond Mesh	73 lbs.
PD14-48	— 14 ft. Diamond Mesh	83 lbs.



PO 8-48	— 8 ft. Ornamental Mesh	55 lbs.
PO10-48	— 10 ft. Ornamental Mesh	65 lbs.
PO12-48	— 12 ft. Ornamental Mesh	75 lbs.
PO14-48	— 14 ft. Ornamental Mesh	85 lbs.

Ornamental Fabric

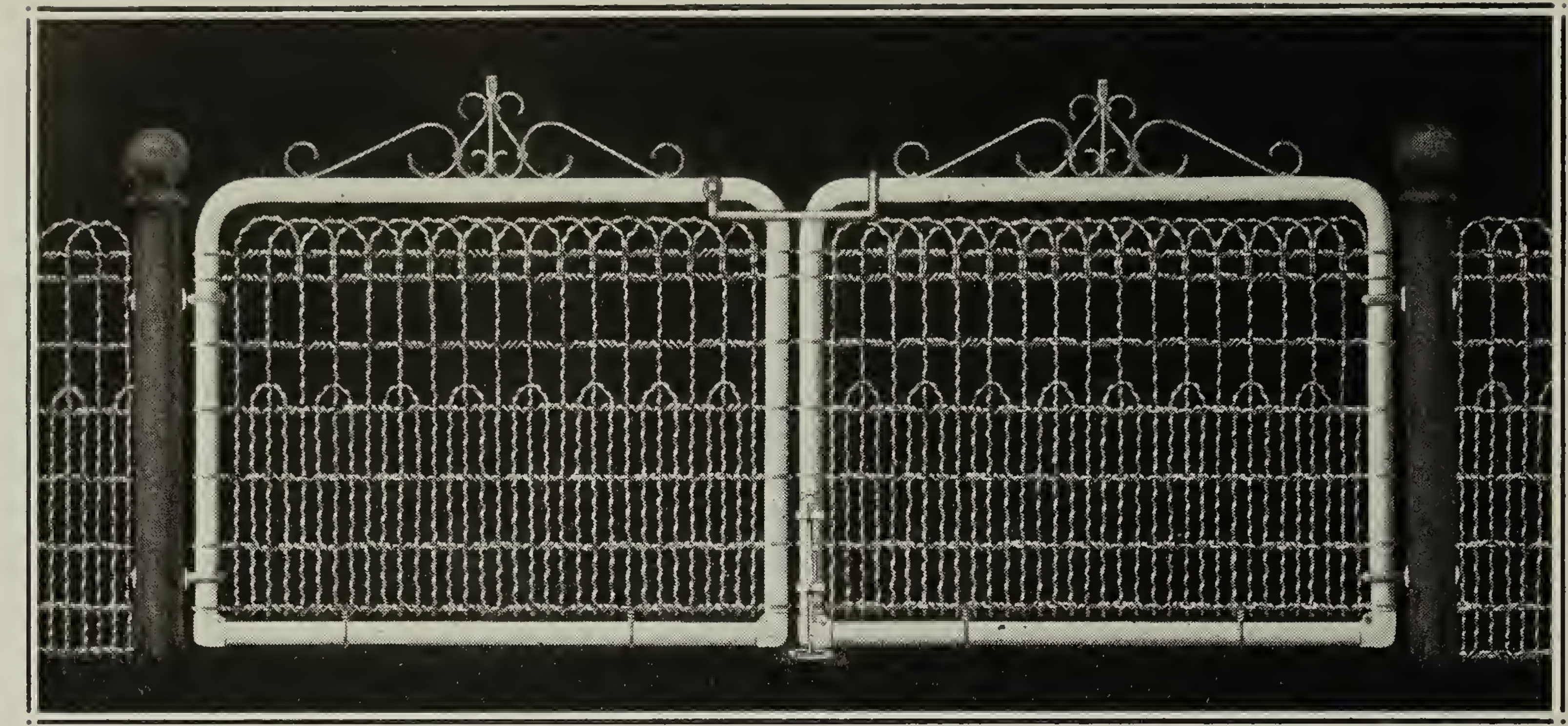
This pattern is unusually attractive and should be ordered when ornamental fabric is used around the yard—mesh openings at the bottom are 1⅜ inches, close enough for small chicks.

Key To Catalog Numbers

Letters indicate style.
First figure width of opening in feet.
Second figure height in inches.

SPECIFICATIONS—PS, PD, and PO Patterns

FRAME — 1$\frac{5}{16}$″ O. D. brazed seam, special stiff high carbon steel tubing.
WIRE — PS No. 9 wire, PD No. 13 wire, PO No. 9 pickets No. 12½ double twisted line wires.
LATCH — Single automatic.
HINGES — ⅝″ Eye-bolts for wood posts.
FINISH — Galvanized.



"L" Ornamental Double Drive Gate

VERY beautifully designed double drive gate at your front entrance presents a very attractive appearance to the public. It is strong and durable. It is often used with the complete ornamental fence, lends dignity and beauty to the home and lawn.

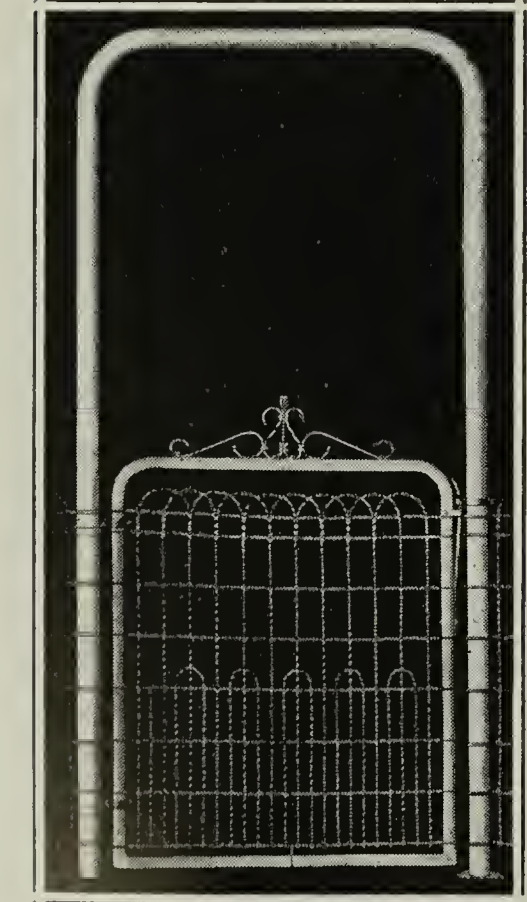
Specifications

FRAME — 1$\frac{5}{16}$″ O. D. brazed seam, high carbon steel tubing.
WIRE — No. 9 pickets, No. 12½ double twisted lateral strands.
PICKET SPACING — At bottom 1⅜″ opening. At top 3″ openings.
LATCH — Slide pin for ground socket. Loop latch at the top.
HINGES — ⅝″ Eye-bolts for wood post.
FINISH — Galvanized.

L 8-48 — 8 ft.	65 lbs.
L10-48 — 10 ft.	75 lbs.
L12-48 — 12 ft.	85 lbs.
L14-48 — 14 ft.	95 lbs.
L16-48 — 16 ft.	105 lbs.

Hinges, steel posts (2 set required) page 142. Odd lengths 5% extra.

May be supplied without scroll.



Arch Walk Gate

This combined walk gate and arch is not only attractive in appearance but is very substantial. The arch being made from 1.9″ O. D. extra heavy weight brazed seam high carbon steel tubing and eliminates the two usual fence posts and braces. Is shipped set up complete.

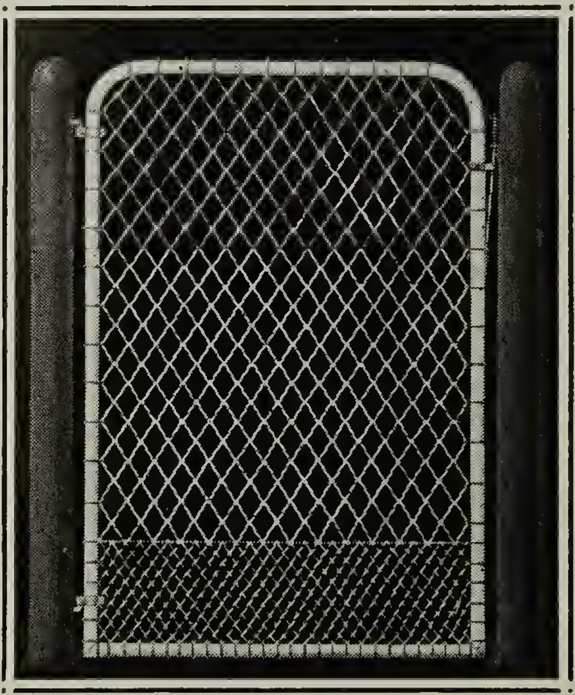
Specifications

GATE — See details page 141.
ARCH — 8′ 6″ over-all, 7′ clearance.
FINISH — Galvanized. Shipped set up.

AG3-42 — 3 ft.	80 lbs.
AG3½-48 — 3½ ft.	90 lbs.
AG4-48 — 4 ft.	100 lbs.

Poultry Gate "O"

In construction and specifications, the same as DS7 gate page 141. 2″ diamond mesh plain top, No. 13 galvanized wire and double mesh at bottom, makes this gate poultry tight.

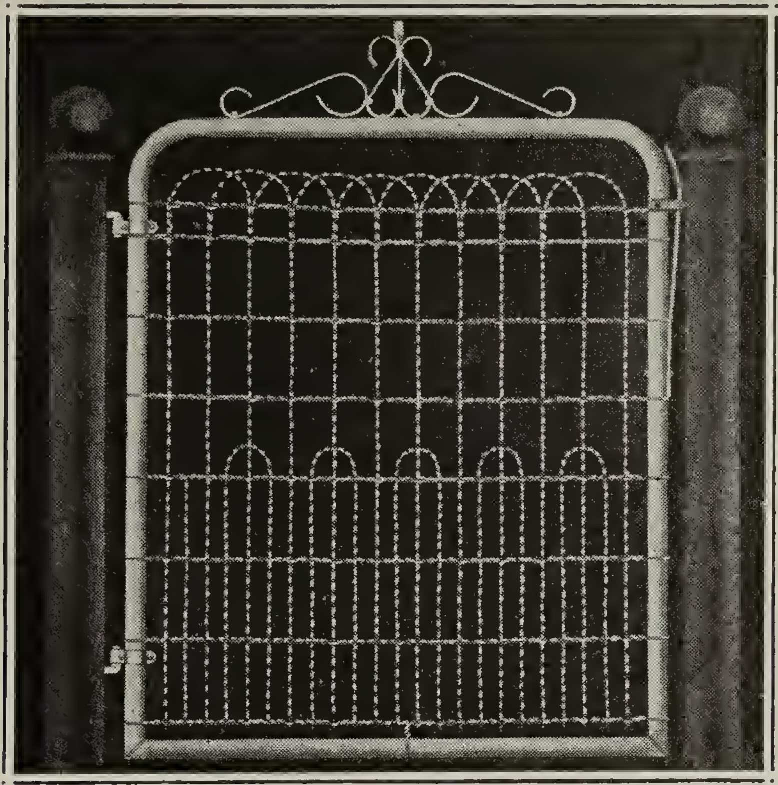


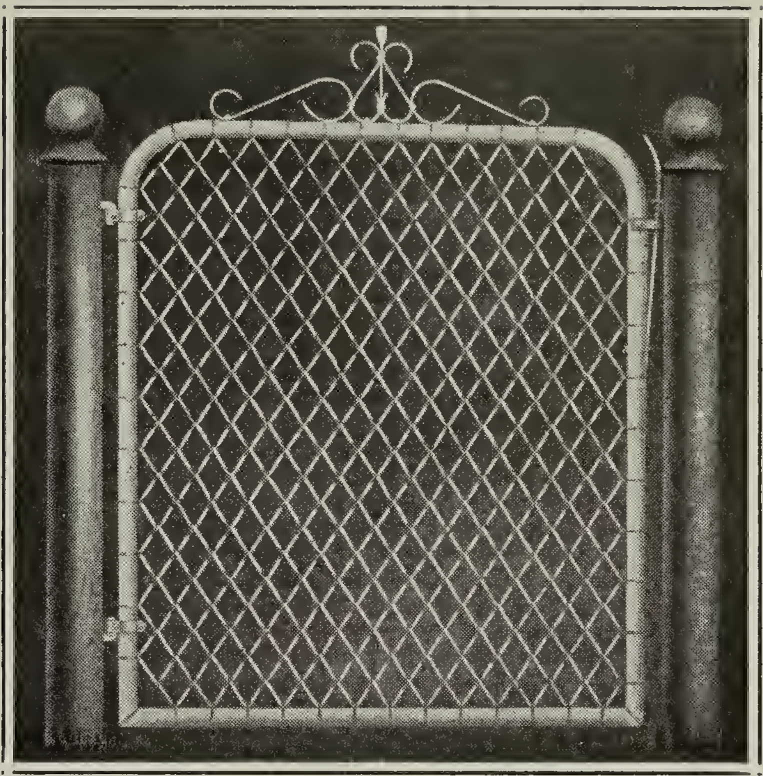
O3-60 — 3 ft.	17 lbs.
O3½-60 — 3½ ft.	18 lbs.
O4-60 — 4 ft.	19 lbs.

Extras same as walk gates, page 141.

Second figure of catalog number indicates height of gate frame. If diamond mesh or plain top walk gate is used price reduced accordingly.

Walk Gates





There is certainly no single thing that adds so to the convenience of passing from the residence to the yard as a substantial, good looking and easily handled walk gate.

These gates we offer in four different styles as follows:

OS — Ornamental fabric, scroll top.
DS — Diamond mesh, scroll top.
OP — Ornamental fabric, plain top.
DP — Diamond mesh, plain top.

Specifications for all Walk Gates

PIPE — $1\frac{1}{16}$" O. D. brazed seam, high carbon steel tubing.
WIRE — Diamond mesh No. 13. Ornamental mesh No. 9 pickets No. 12½ double strength laterals.
HINGES — Clamp castings and screw hooks, see above. Scroll ¾" x ⅛" bands riveted on.
FINISH — Galvanized. Corners, bottom, brazed joint, top bent.

Hinge for steel posts extra, page 142. Odd lengths and odd heights 5% extra.

Key to Cat. Nos. Letters indicate the style. The first figure the width of opening in feet. The second figure the height of frame in inches.

Style OS

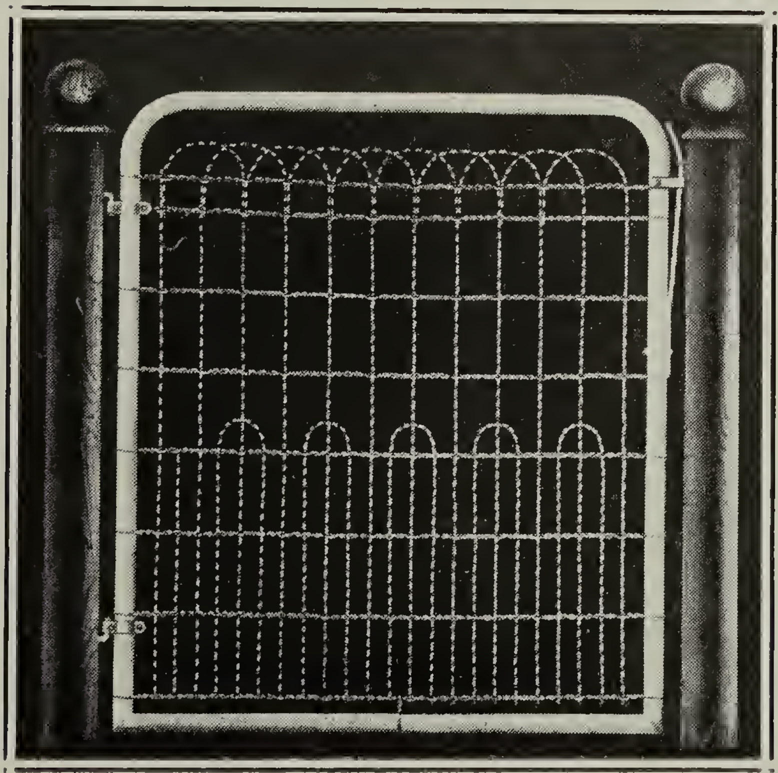
OS3-36	— 3 ft. x 3 ft.	16 lbs.
OS3-42	— 3 ft. x 3½ ft.	17 lbs.
OS3-48	— 3 ft. x 4 ft.	18 lbs.
OS3½-42	— 3½ ft. x 3½ ft.	18 lbs.
OS3½-48	— 3½ ft. x 4 ft.	19 lbs.
OS4-48	— 4 ft. x 4 ft.	20 lbs.

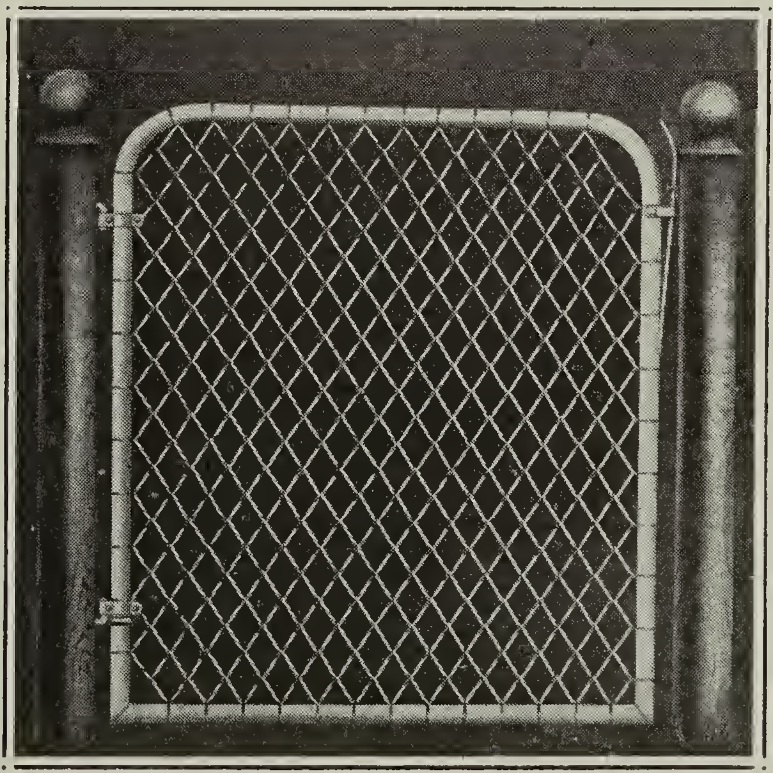
Style OP — Same as below.

Style DS

DS3-36	— 3 ft. x 3 ft.	16 lbs.
DS3-42	— 3 ft. x 3½ ft.	17 lbs.
DS3-48	— 3 ft. x 4 ft.	18 lbs.
DS3½-42	— 3½ ft. x 3½ ft.	18 lbs.
DS3½-48	— 3½ ft. x 4 ft.	19 lbs.
DS4-48	— 4 ft. x 4 ft.	21 lbs.

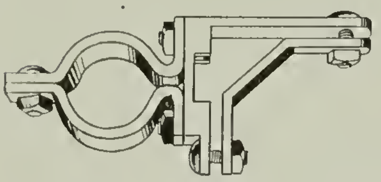
Style DP — Same as below. Extras, see above and page 143.





Special Hinges and Latches

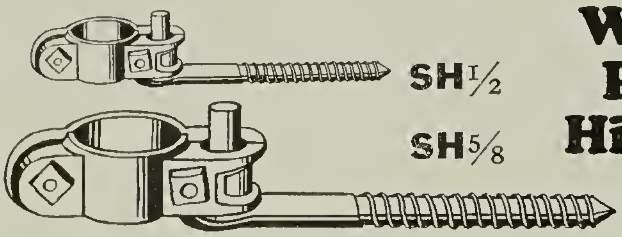
All hinges and latches have galvanized finish. Pictures show single hinge, sold as sets enough for one gate. When ordering specify — number set, catalog number, gate pipe size, post pipe size, length shank, price per set.



F-21 Angle Post Hinges

Fits Angle 2″ x 2″ and 2½″ x 2½″

F21 C	Size gate pipe $1\frac{1}{16}$″
F21 B	Size gate pipe $1\frac{5}{16}$″
F21 A	Size gate pipe 1⅝″
F21 D	Size gate pipe 1.9-2″

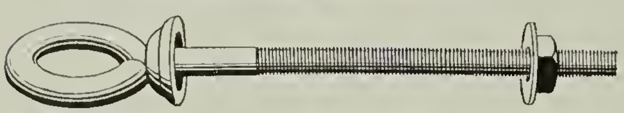


Wood Post Hinges

SH⅝-37	Size gate pipe 2″
SH⅝-L6A	Size gate pipe 1⅝″
SH⅝-K171	Size gate pipe $1\frac{5}{16}$″
SH½-HP53	Size gate pipe $1\frac{5}{16}$″
SH½-35	Size gate pipe $1\frac{1}{16}$″

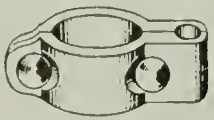
⅝ in. screw hooks with 6″ or 9″ shank, ½ in. screw hooks 5″ shank. If pipe clamps only are needed, see below.

Eye Bolt Hinges for Wood Posts



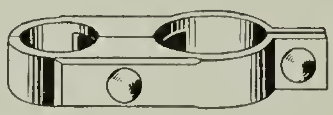
EB½-1$\frac{1}{16}$″	Size gate pipe $1\frac{1}{16}$″
EB⅝-1$\frac{5}{16}$″	Size gate pipe $1\frac{5}{16}$″
EB⅝-1⅝″	Size gate pipe 1⅝″
EB⅝-2″	Size gate pipe 2″

Shank on EB½ — $1\frac{1}{16}$″ is 8 in.
Shank on others is 10 in.
Longer shanks no extra charge.



Gate Pipe Hinge Clamps

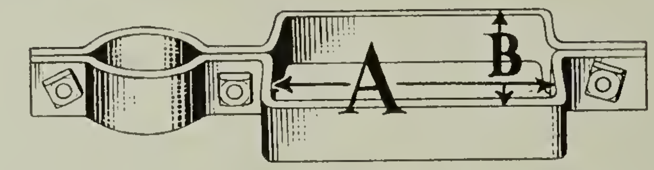
	Size gate pipe	Size pintel hole
35	$1\frac{1}{16}$″	½″
HP53	$1\frac{5}{16}$″	½″
K171	$1\frac{5}{16}$″	⅝″
L6A	1⅝″	⅝″
37	1.9-2″	⅝″



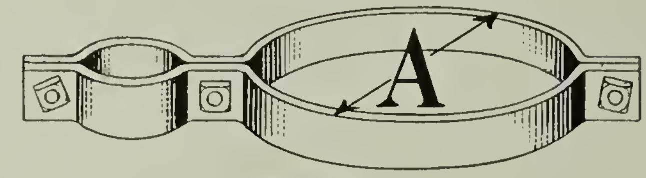
AP—Steel Pipe Post Hinges

	Size gate pipe	Size post pipe
AP3	$1\frac{5}{16}$″	2⅜-2½″
AP4	$1\frac{5}{16}$″	3-3¼″
AP5	1⅝″	2⅜-2½″
AP6	1⅝″	3-3¼″
AP7A	1.9-2″	2⅜-2½″
AP8A	1.9-2″	3-3¼″

Square and Round Cement Post Hinges



SP11

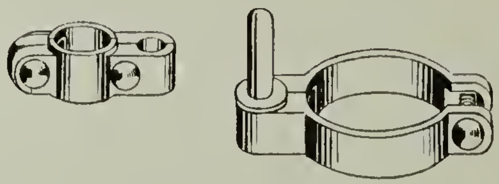


SP12

These are hand forged to order — specify gate pipe size and either A & B or A measurement. Made for walk gates, drive gates or heavy field gates if desired. Used for wood or cement posts.

SP—Pipe Post Hinges

[For Walk Gates]

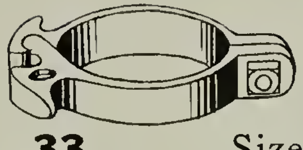


	Size gate pipe	Size post pipe
SP2	$1\frac{1}{16}$″	1.9-2″
SP2½	$1\frac{1}{16}$″	2¼-2⅜-2½″
SP3	$1\frac{1}{16}$″	2⅞-3-3¼″

If post clamps not needed, see separate list.

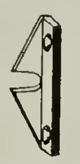
All pipe sizes here are in inches (″) showing outside diameter.

Clay Walk Gate Latch Catches

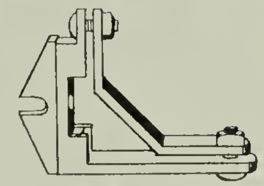


Steel Pipe Posts

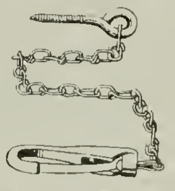
33 ...... Size post pipe 1.9-2″
33A .. Size post pipe 2⅜-2½″
33B Size post pipe 2⅞-3-3¼″



Wood Post No. 10



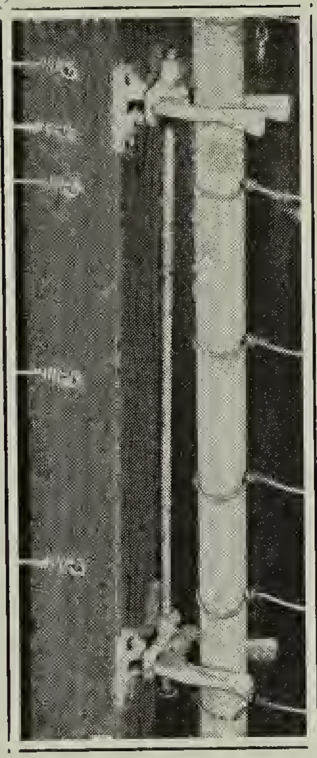
Angle Post F21-10



Chain Latch CL1

All pipe sizes here are outside diameter in inches. Where two pipe sizes are shown, for example 1.9-2″ it means that fitting may be used on pipe one and nine-tenths inches and also two inches outside diameter.

Automatic Gate Latches



Latch on Wood Post

(See left)

		Size gate pipe
L10A-9B	— Double latch	1 5/16″
L10A-9A	— Double latch	1⅝″
L10A-9E	— Double latch	1.9-2″

Single latch can be supplied.

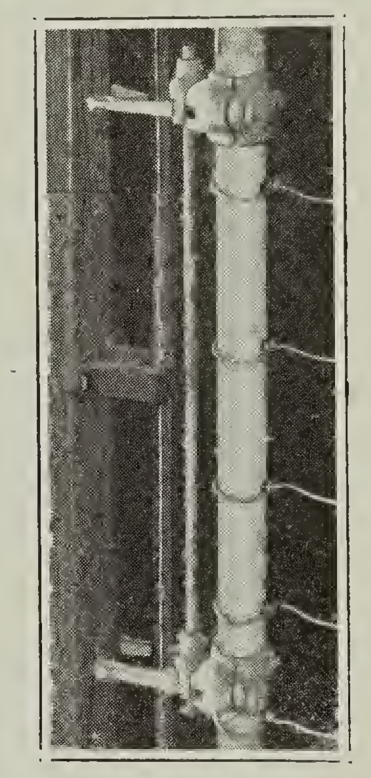
Latch on Gate for Wood Post

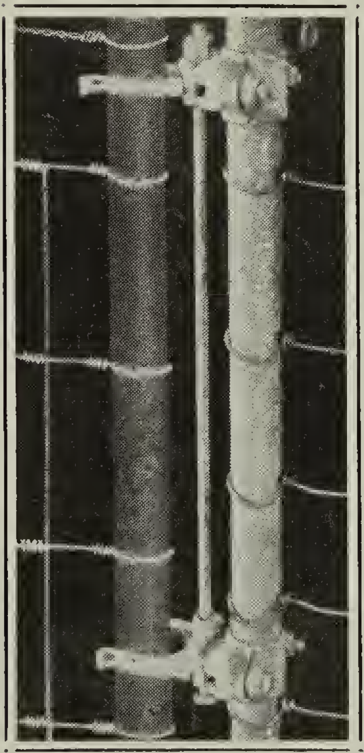
(See right)

		Size gate pipe
L13-12B	— Double latch	1 5/16″
L11- 9B	— Double latch	1⅝″
L19- 9B	— Double latch	1.9-2″

Single latch can be supplied.

Last three latches require 2 inches wider gate opening.





Latch on Gate for Steel Posts

(All double latches.)

	Size gate pipe	Size post pipe
L13-12D	1 5/16″	1.9-2″
L13-12E	1 5/16″	2⅜″
L13-12F	1 5/16″	2⅞-3″
L13-12G	1 5/16″	3½-4″
L11- 9C	1⅝″	1⅝″
L11- 9D	1⅝″	1.9″
L11- 9E	1⅝″	2⅜″
L11- 9F	1⅝″	3-3¼″
L11- 9G	1⅝″	3½-4″
L19- 9D	1.9-2″	1.9-2″
L19- 9E	1.9-2″	2⅜″
L19- 9F	1.9-2″	3-3¼″
L19- 9G	1.9-2″	3½-4″
L19- 9H	1.9-2″	5″

Single latch can be supplied.

SPECIAL NOTICE

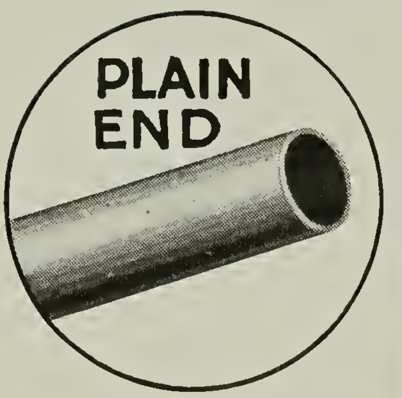
CLAY Automatic Gate Latches open easily, hold the gate securely under all conditions. They are made of best grade malleable iron and steel. By interchanging the fork the CLAY latch will fit any size or style of steel post.

When special latches are ordered on gates, allowance is made for regular latches. Full extra price is charged on special hinges.

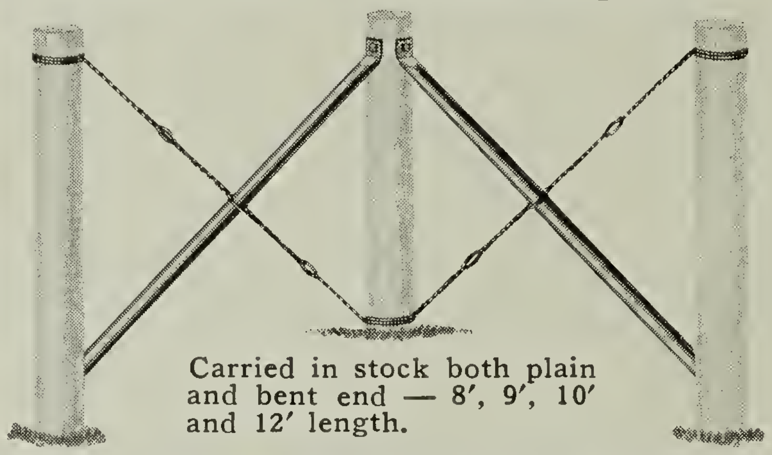
Tubular Flue Fence Braces

Made From 2″ and 2¼″ Reclaimed Flues

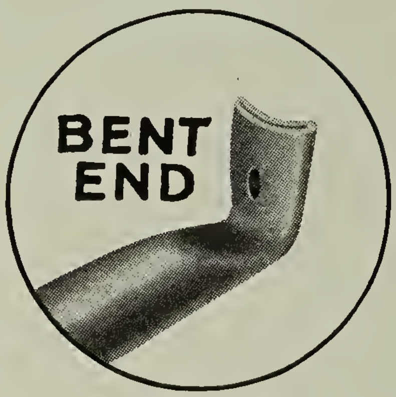
It is very simple to make solid, long lasting fence corners with CLAY steel braces. They are easy to install, fit perfectly and will not bend or twist thus loosening fence.



We carry two styles — plain end and formed end in stock at all times.



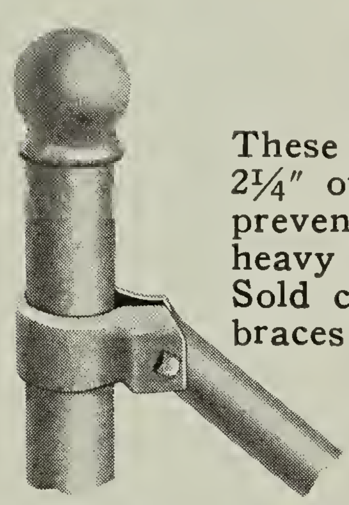
Carried in stock both plain and bent end — 8′, 9′, 10′ and 12′ length.



Our bent end brace is formed to fit posts snugly giving extra strength.

End and Corner Posts

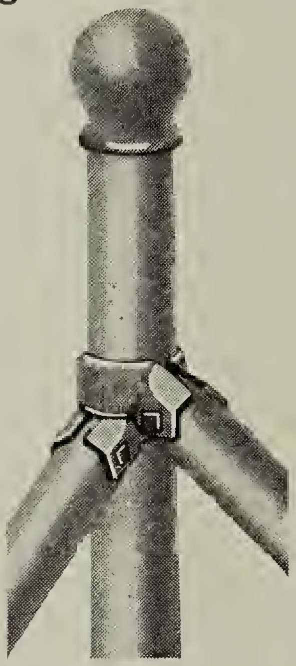
These posts are made from heavy flue steel tubing 2¼″ outside diameter and are painted with a red rust preventative paint. Top of each post is finished with heavy ornamental steel cap securely wedged in place. Sold complete with one brace for end posts and two braces for corner posts. Specify style and length.



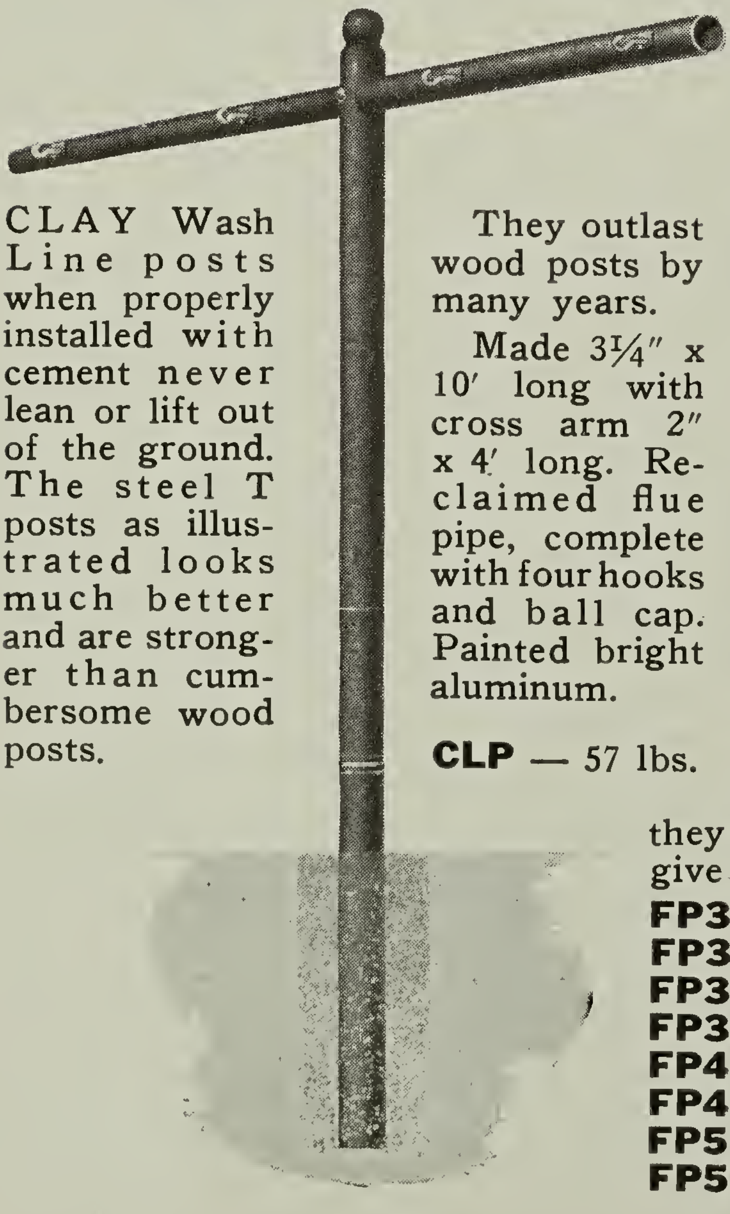
No. 5F1C End

Braces, 2″x8′ Lengths, 60″, 72″, 84″, 96″

No. 5F1C Corner



Wash Line Posts



CLAY Wash Line posts when properly installed with cement never lean or lift out of the ground. The steel T posts as illustrated looks much better and are stronger than cumbersome wood posts.

They outlast wood posts by many years.

Made 3¼″ x 10′ long with cross arm 2″ x 4′ long. Reclaimed flue pipe, complete with four hooks and ball cap. Painted bright aluminum.

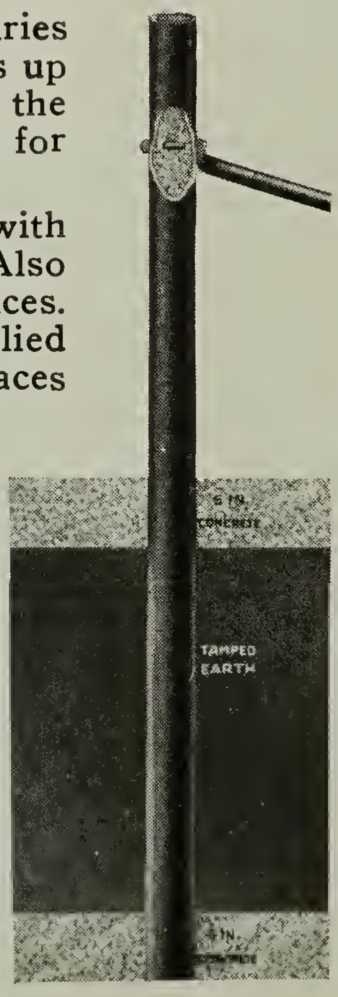
CLP — 57 lbs.

Steel Fence Posts

Because market price varies and because freight makes up a considerable portion of the cost ask your local Dealer for prices.

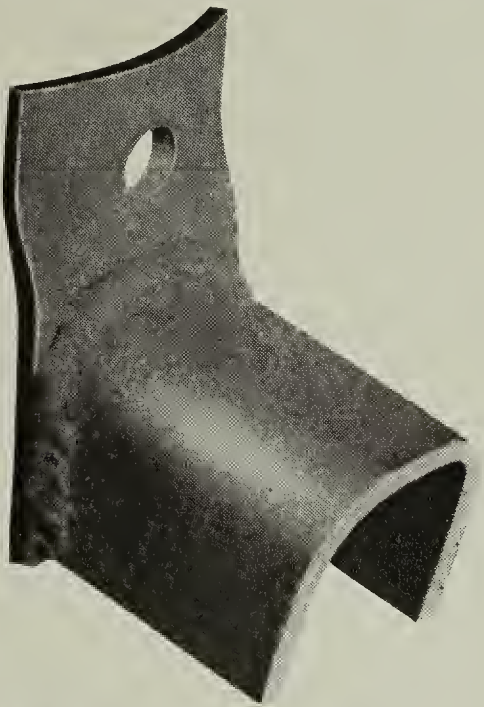
All posts are drilled with two holes to hang gates. Also holes for bent end braces. Bolts for braces are supplied with posts but bent end braces should be ordered to go with posts.

Illustration shows proper method of setting posts. When posts are set in this manner they will last twice as long and give much better service.



FP3 -7½	—3″x7½′	30 lbs.
FP3 -8	—3″x8′	35 lbs.
FP3½-7½	—3½″x7½′	37 lbs.
FP3½-8	—3½″x8′	40 lbs.
FP4 -7½	—4″x7½′	45 lbs.
FP4 -8	—4″x8′	48 lbs.
FP5⅜-7½	—5⅜″x7½′	56 lbs.
FP5⅜-8	—5⅜″x8′	60 lbs.

U-Bar Fence Braces

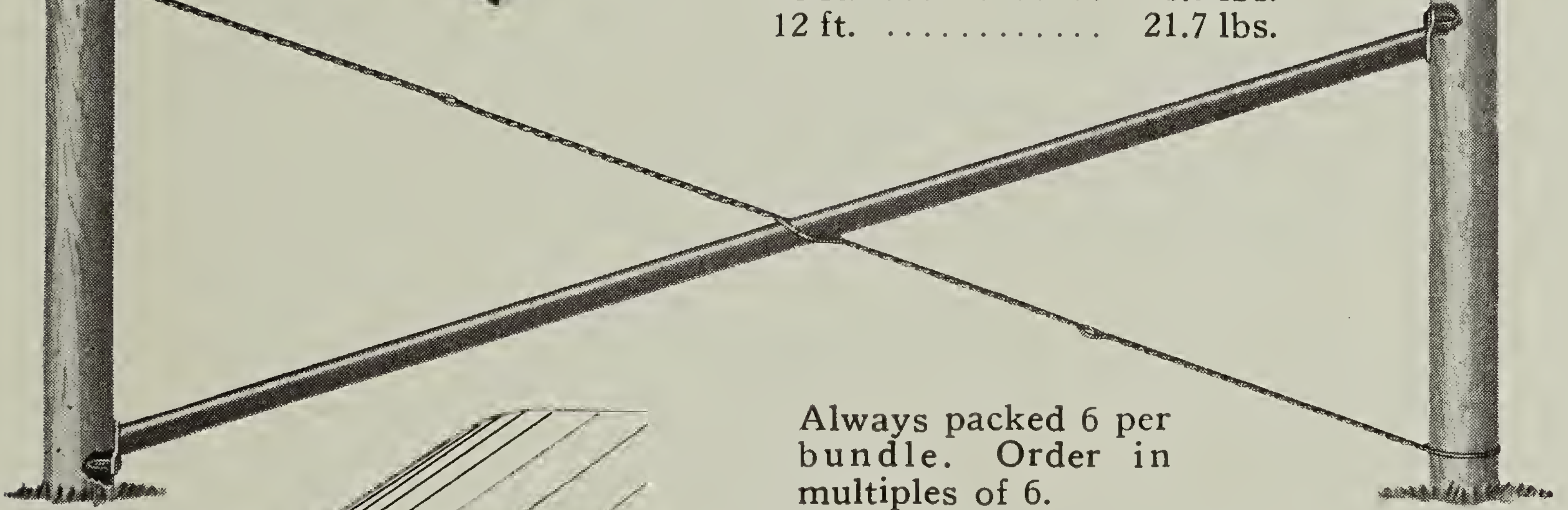


High Carbon Steel

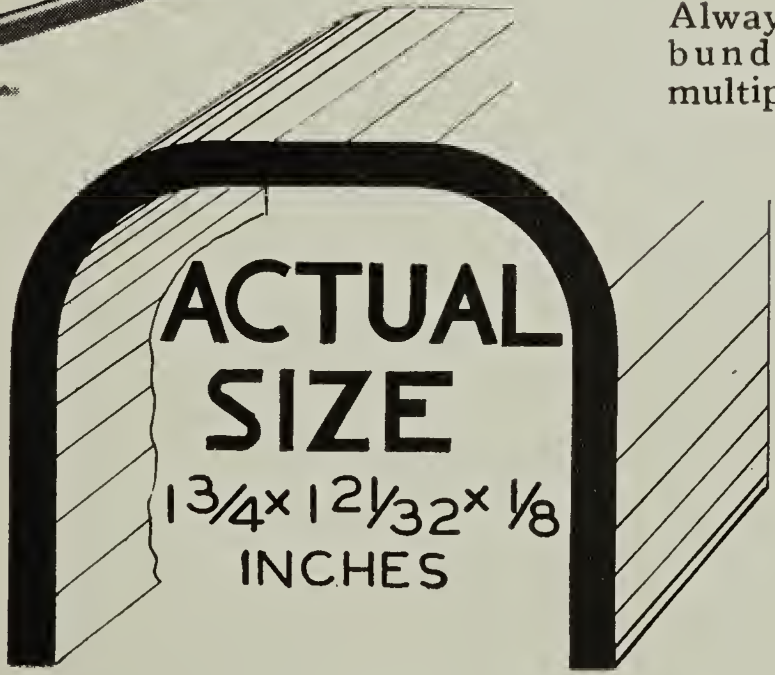
These new U-bar braces made from special high carbon steel on our own rolls are without doubt the strongest — longest lasting fence braces on the market. They are specially designed to give the greatest possible strength in all directions of strain.

SIZES AND WEIGHTS

Length	Wt. Either Style
8 ft.	14.5 lbs.
9 ft.	16.3 lbs.
10 ft.	18.1 lbs.
12 ft.	21.7 lbs.



Always packed 6 per bundle. Order in multiples of 6.



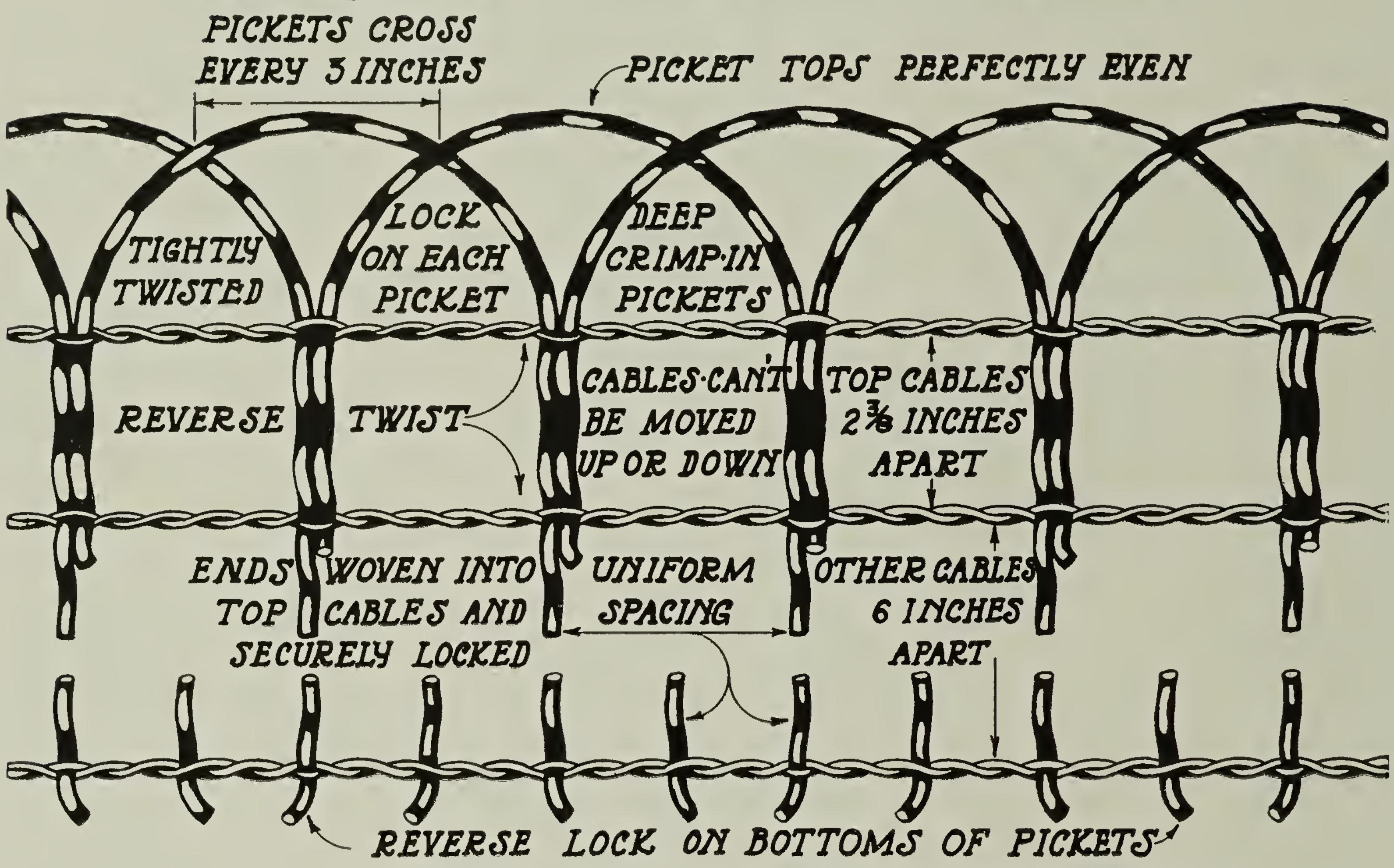
New Style Brace

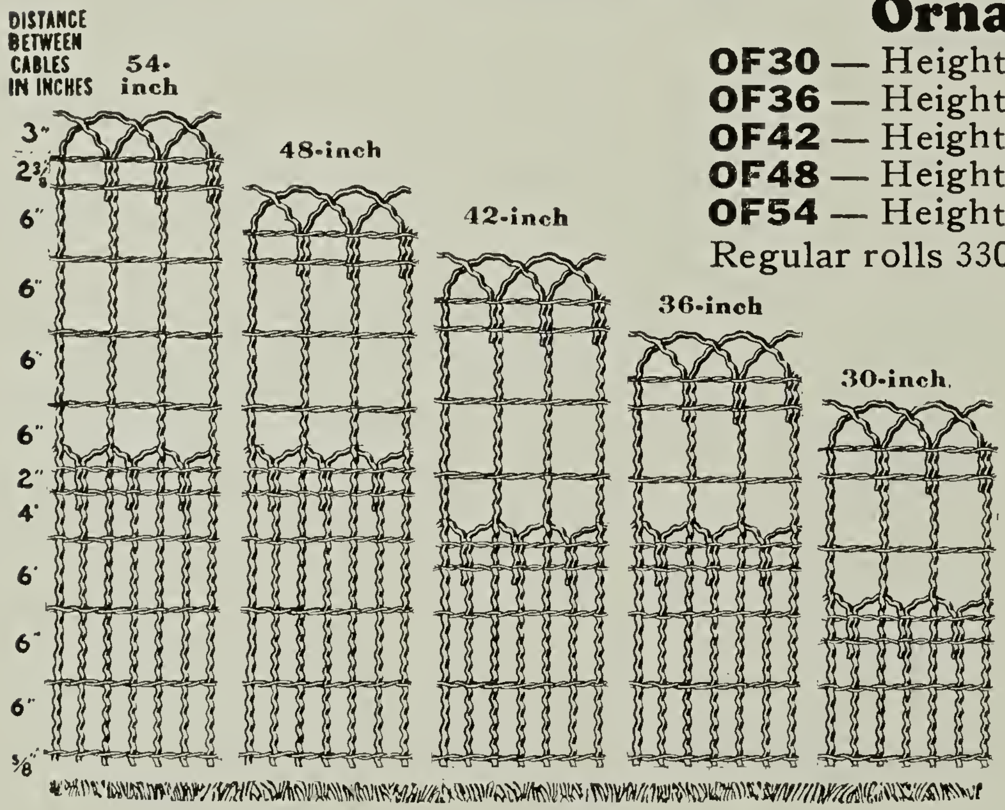
This brace is designed to give the greatest strength. It is made from the same Rail Steel that is found in the Railroad Rails and is known for its strength. CLAY better grade farm gates have used this steel for 25 years and now through special rolls we are able to offer it as a new and better fence brace.

Made in Two New Styles

This new U-bar rail steel brace is made in two patterns. One style known as the Footed Brace has a flat end of steel 2″ x 3″ x $\frac{3}{16}$″ electrically welded onto each end of the brace giving a large bearing surface on the posts. This foot is formed to fit the post perfectly and has a hole punched in it for anchoring it firmly to the post with a nail or screw. The Plain End brace has no end attachment for tying to post. The sharp corners of the metal gouge into the post and anchor it firmly. These new braces have been thoroughly tested out in our testing laboratory and are found three or four times stronger than needed for fence post braces.

Clay Ornamental Fabric


PICKETS CROSS EVERY 3 INCHES
PICKET TOPS PERFECTLY EVEN
TIGHTLY TWISTED
LOCK ON EACH PICKET
DEEP CRIMP IN PICKETS
REVERSE
TWIST
CABLES CAN'T BE MOVED UP OR DOWN
TOP CABLES 2⅜ INCHES APART
ENDS TOP
WOVEN INTO CABLES AND SECURELY LOCKED
UNIFORM SPACING
OTHER CABLES 6 INCHES APART
REVERSE LOCK ON BOTTOMS OF PICKETS



Ornamental Fabric

OF30 — Height 30 in. Weight per foot 1¼ lbs.
OF36 — Height 36 in. Weight per foot 1½ lbs.
OF42 — Height 42 in. Weight per foot 1¾ lbs.
OF48 — Height 48 in. Weight per foot 2 lbs.
OF54 — Height 54 in. Weight per foot 2¼ lbs.
Regular rolls 330′ each. Cut to length 10% extra.

Ratchet Stretcher and Ring

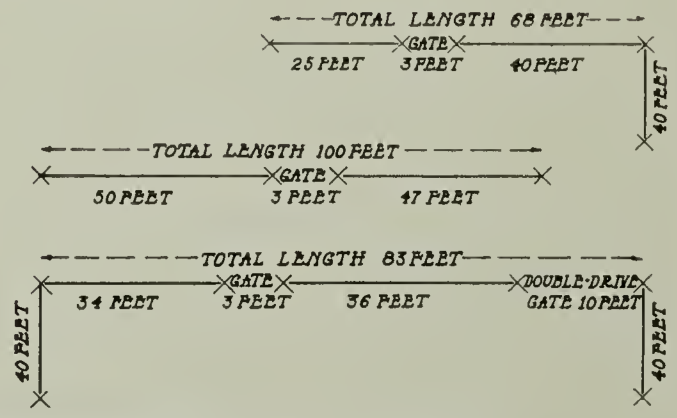
Note: One ratchet stretcher and ring as above is required for the two ends of each lateral wire.

The illustration on the left shows number of lateral wires for each height of ornamental fabric.

How to Order Complete Fence

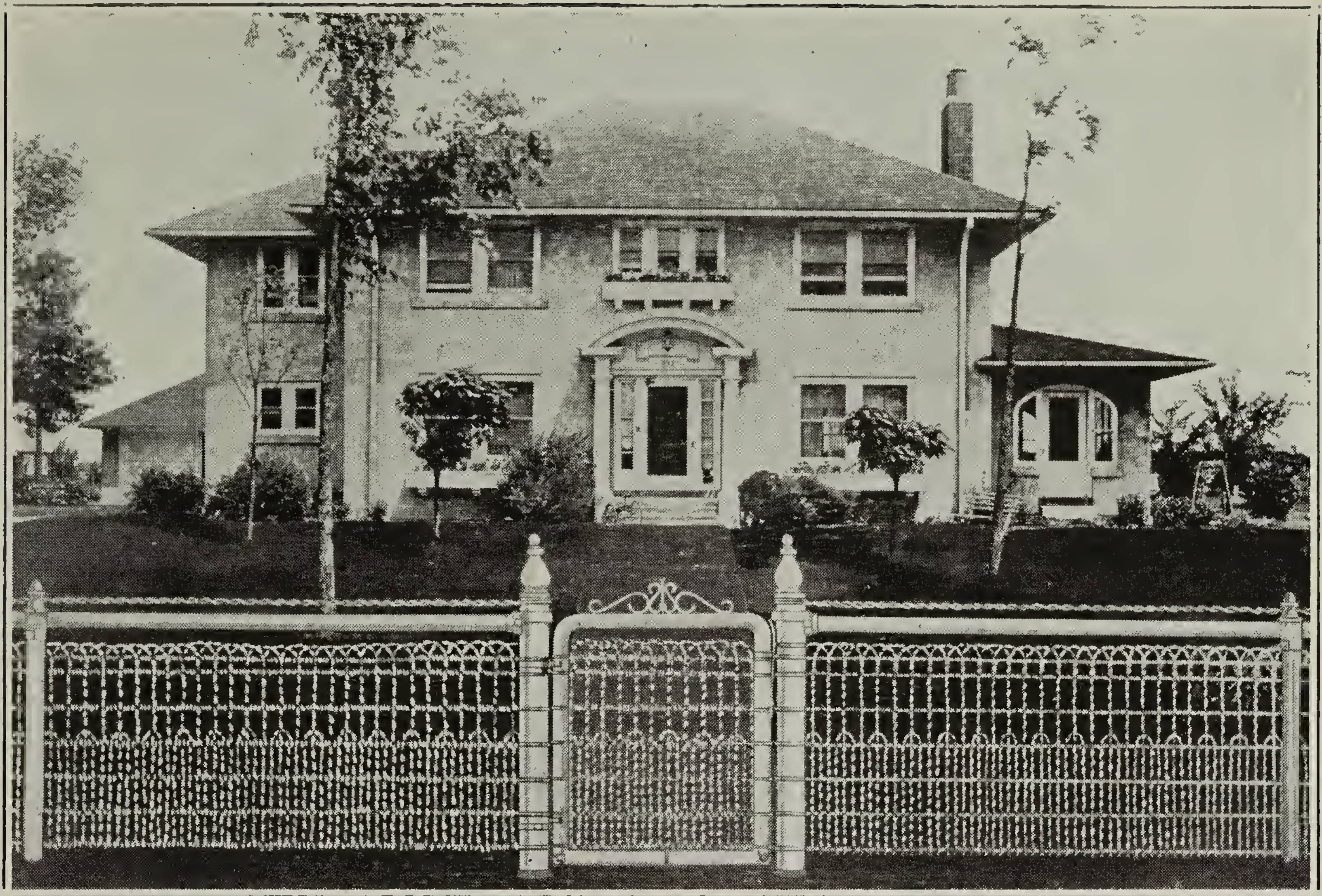
Furnish us a rough sketch similar to diagram at the right. We will prepare a working plan showing location of all gates, posts, etc. Gate openings (except arches) are measured as fence and charged for at same price per foot, with a small additional charge for each gate.

Your sketch should show location of end, corner and gate post indicating by X. For each straight line of fence overall measurement as indicated by dotted lines in diagram. Also give measurements for each separate section and opening as shown by solid lines.



For each gate opening, indicate the width, height and kind of gate desired.

Olympic fence permits the use of any size or weight of Gates. On other types use Style L or Style P up to 12 foot, or any size walk gate.



Olympic Complete Fence

THE CLAY Olympic fence is positively the finest in ornamental fence and the greatest value obtainable. Its heavy construction and dignified appearance carries an appeal to all who see it. Especially recommended for cemetery enclosures.

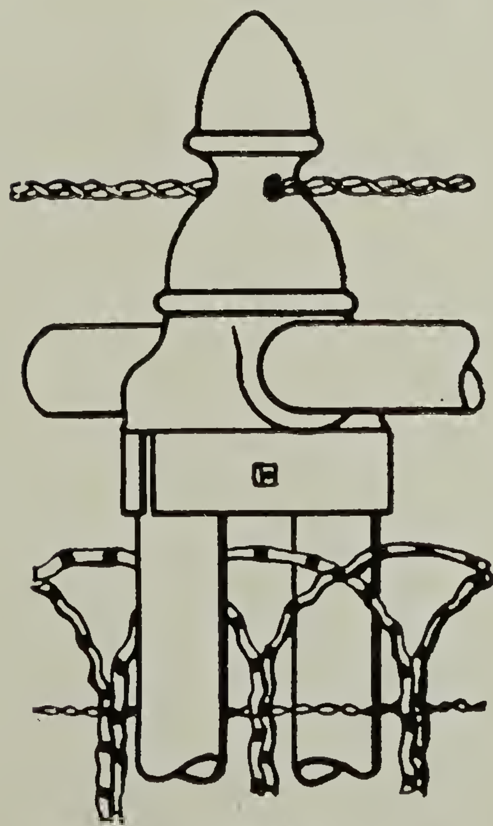
Description and Specifications

All end, corner and gate posts are heavy steel tubing 2⅜″ O. D. Line posts are double, made of two steel tubes each 1$\frac{5}{16}$″ O. D. CLAY fence parts galvanized with zinc. Line posts set 7′ to 9′ apart. Makes the ideal cemetery fence. Olympic posts have heavier and taller caps than other styles.

Height of fabric is 6″ less than height of fence.

Cat. No.	Height Overall	Height of Fabric	Weight Per Foot
OF360	36″	30″	6½ lbs.
OF420	42″	36″	7 lbs.
OF480	48″	42″	7½ lbs.
OF540	54″	48″	8 lbs.

CLAY Complete Fence is specially designed for cemeteries, parks, country homes and residential property of all kinds. Send us a sketch with measurements for our quotation.



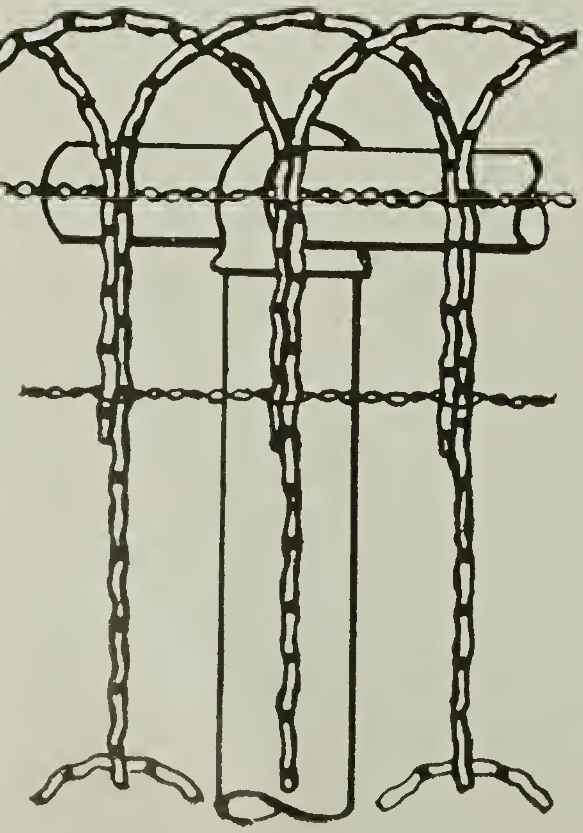
Olympic Double Line Post.

Stratford Complete Fence

THE ever-increasing desire for well kept lawns and home yards aside from the problem of animal trespassing has made ornamental fence very popular with the farm wife. Consult your local dealer for further information on ornamental fence.

Description and Specifications

Single line posts 1.9 O. D. Rail is $1\frac{5}{16}''$ outside diameter. End and Gate Posts 1.9 inches outside diameter. Ratchets, each lateral wire is supplied with ratchet stretcher at one end and ring for attaching to post at opposite end. Galvanized finish. Fabric is dressed above top of rail. Height of fabric is height of fence. No cable or cresting is used.



All CLAY ornamental fence is shipped complete with all parts.

Figure price as overall length including gate openings.

Cat. No.	Height of Fence and Fabric	Weight Per Foot
OF36S	36″	5 lbs.
OF42S	42″	5½ lbs.
OF48S	48″	6 lbs.
OF54S	54″	6½ lbs.

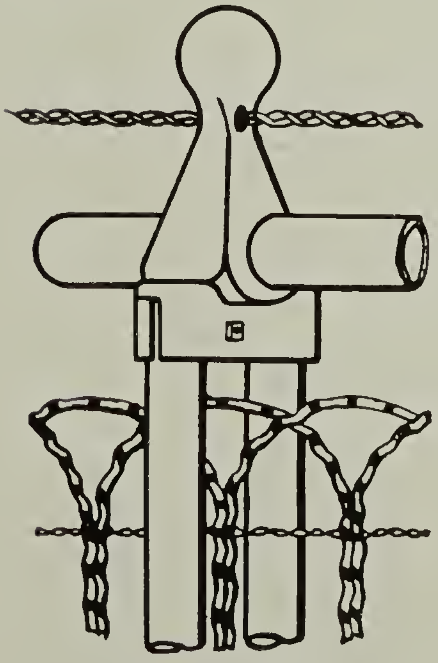
CLAY Complete Fence is specially designed for cemeteries, parks, country homes and residential property of all kinds. Send us a sketch with measurements for our quotation.

Cumberland Complete Fence

AN ornamental fence enclosure adds many times its cost to the value of a farm home. It suggests improved property and that the owner is progressive and has outstanding originality. An installation of ornamental fence makes a lifetime improvement that is neat and attractive. A source of great satisfaction to the owner.

Description and Specifications

End, corner and gate posts 1.9″ O. D. Line posts are double made of $1\frac{1}{16}''$ O. D. Rail is $1\frac{5}{16}''$ diameter made continuous by rail coupling. Ornament midway between posts. All lateral wires on CLAY fence drawn to proper tension by ratchets to end post. Height of fabric is 6″ less than height of fence.



Cumberland Double Line Post.

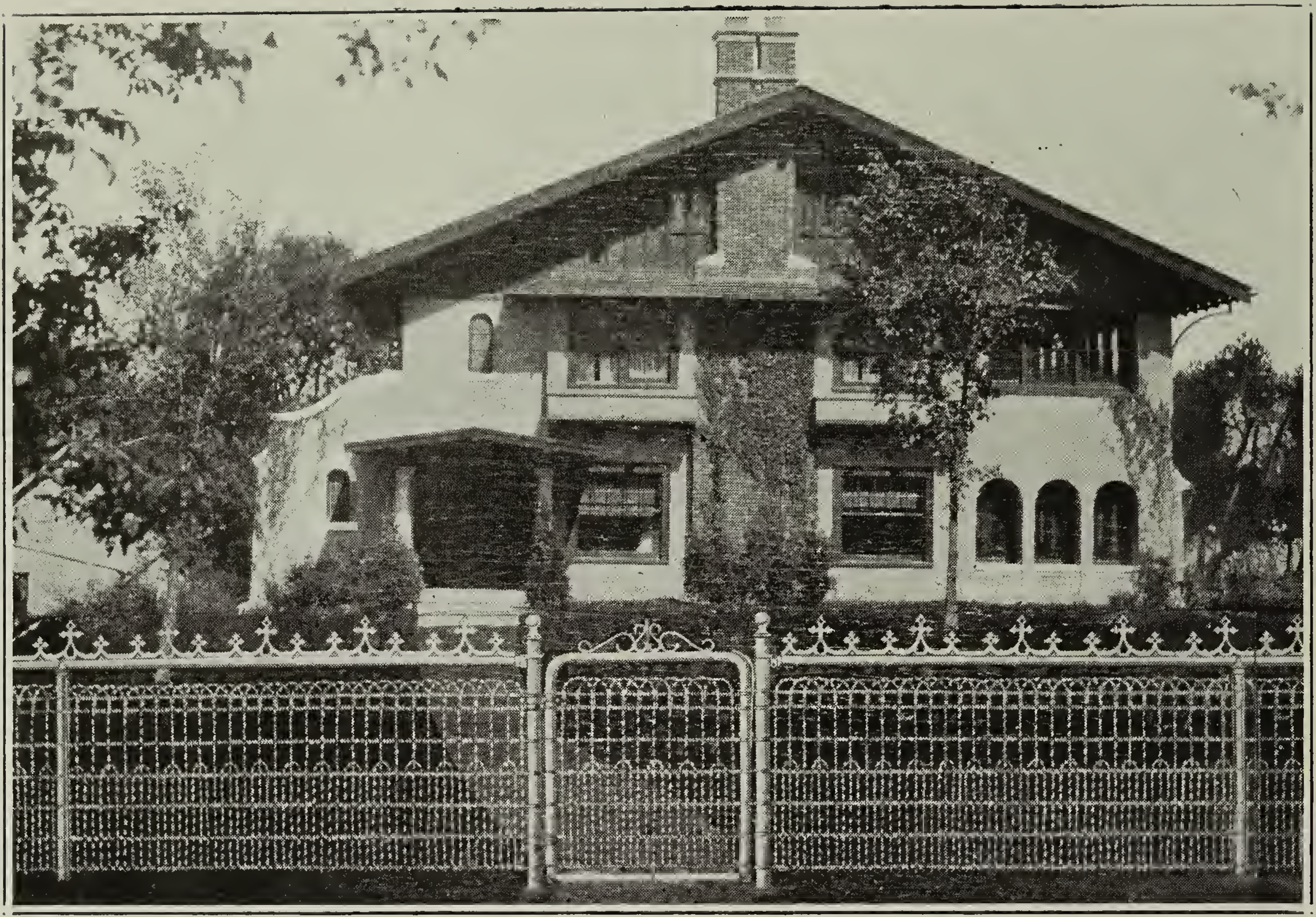
All posts as well as fabric are galvanized.

Price figured on overall length including gate openings.

Send us your inquiries for prices complete with gates.

Cat. No.	Overall Height	Height of Fabric	Weight Per Foot
OF36C	36″	30″	5 lbs.
OF42C	42″	36″	5½ lbs.
OF48C	48″	42″	6 lbs.
OF54C	54″	48″	6½ lbs.

CLAY Complete Fence is specially designed for cemeteries, parks, country homes and residential property of all kinds. Send us a sketch with measurements for our quotation.



Cumberland Cresting Top Fence

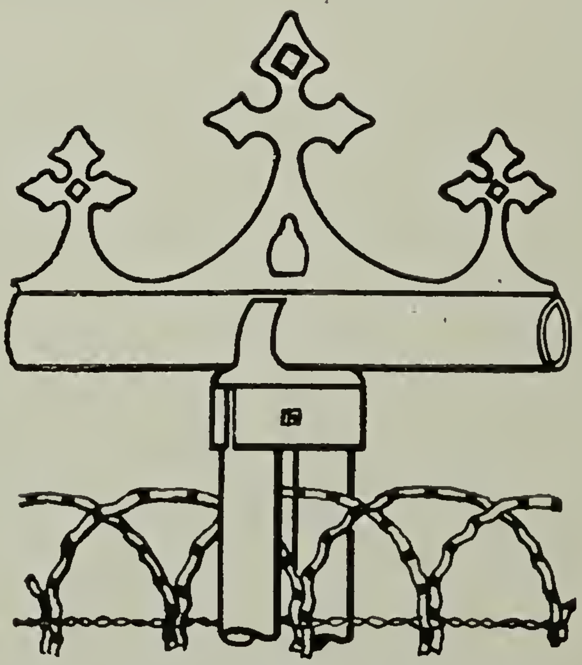
ATTRACTIVE ornamental fence is strikingly suggestive of the pride of ownership. It commands the attention and admiration of the community and increases the value of your property. In addition, a Cumberland ornamental fence is permanent and provides dependable protection.

As shown this fence is same type as Cumberland except has cresting top. This fence commands attention and admiration on account of its dignity. Detailed drawings and complete instructions for erecting CLAY ornamental fence are sent with each shipment. Any one can erect it. Height of fabric is 6″ less than height of fence. Finish is galvanized.

Price figured on overall length including gate openings.

Cat. No.	Height Overall	Height of Fabric	Weight Per Foot
OF36CC	36″	30″	6 lbs.
OF42CC	42″	36″	6½ lbs.
OF48CC	48″	42″	7 lbs.
OF54CC	54″	48″	7½ lbs.

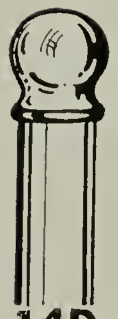
CLAY Complete Fence is specially designed for cemeteries, parks, country homes and residential property of all kinds. Send us a sketch with measurements for our quotation.



Double Line Post for Cumberland Cresting Top Fence.

Ornamental Fence Parts

Galvanized or Painted Finish

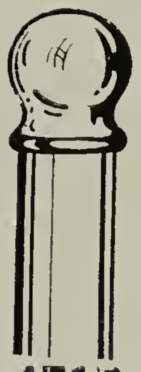


14D

1⅝″ Line Post Pipe Galvanized

Welded Seam, Wt. per ft. 2¼ lbs.

60″	12 lbs.
66″	13 lbs.
72″	14 lbs.



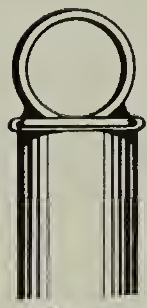
4F1B

2″ Reclaimed Flue Line Posts

Wt. per ft. 2¼ lbs., Painted Aluminum only.

60″	12 lbs.
66″	13 lbs.
72″	14 lbs.
78″	15 lbs.
84″	16 lbs.

Subject to slight surface imperfections.

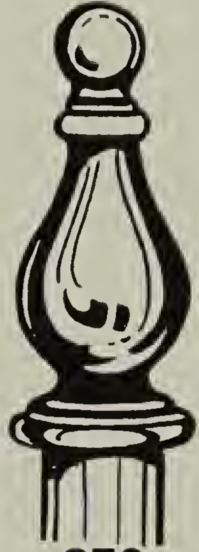


3F5

2⅜″ End, Gate, Corner Posts, Galvanized

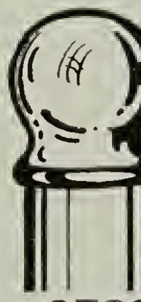
Pipe Brazed Seam Wt. per ft. 2 9/10 lbs.

66″	19 lbs.
72″	20½ lbs.
78″	22 lbs.
84″	23½ lbs.
90″	25 lbs.
96″	26½ lbs.
102″	28 lbs.
108″	29 lbs.
114″	31 lbs.
120″	32½ lbs.

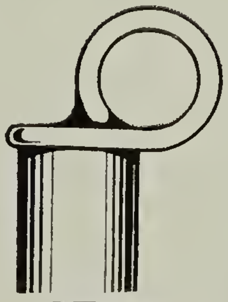


3F6

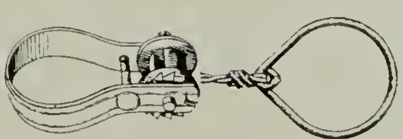
Measurements are all actual pipe length. All line posts supplied with one hole drilled 2″ from top of pipe for staple tie. Below use tie wires.



3F32



3F32A

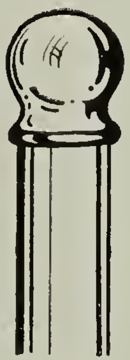


Ratchet Stretcher with Ring Galvanized

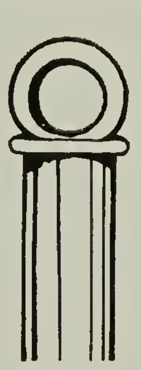
30″ Ornamental Fabric.
Requires 6, 36 -7, 42 -8, etc.
Specify Post Size
Diam. — 1.9″ 2″ 2⅜″ 3″

Line and End Posts 1.9″ Brazed Seam

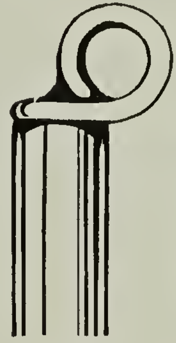
Wt. Per Ft. 2.14 lbs., Galvanized



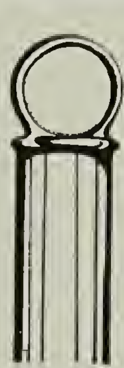
Line End Gate
2F1A



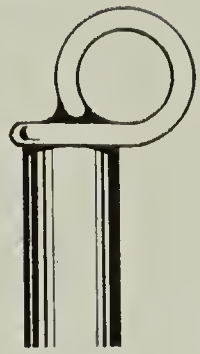
Line Post $1\frac{5}{16}$″ Rail
2F12



Line Post $1\frac{5}{16}$″ Rail
2F12A

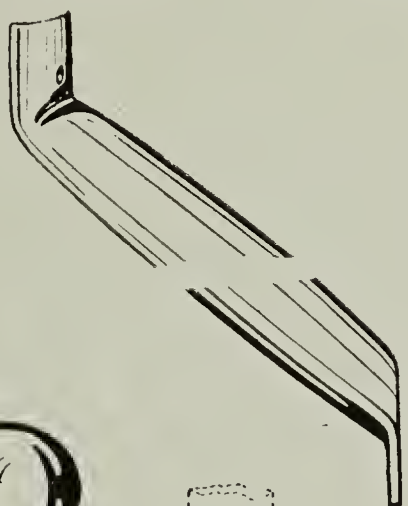


Line Post 1⅝″ Rail
2F28



Line Post 1⅝″ Rail
2F28A

60″ Post	13 lbs.
66″ Post	14 lbs.
72″ Post	15 lbs.
78″ Post	15 lbs.
84″ Post	17 lbs.



X1 — 2″ x 8′ Flue Brace, Painted Aluminum

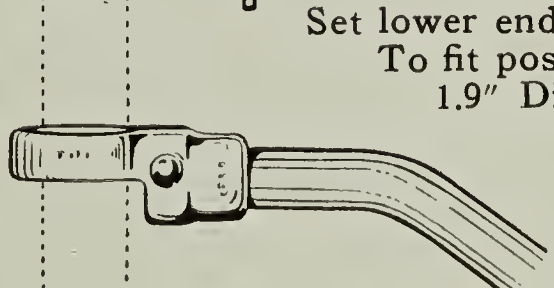
Wt. 17 lbs.

Set lower end in cement. Subject to slight surface imperfections.

X2 — $1\frac{5}{16}$″ x 8′ Galvanized Brace

Wt. 11½ lbs.

Set lower end in cement. To fit post No. 2 1.9″ Diam.

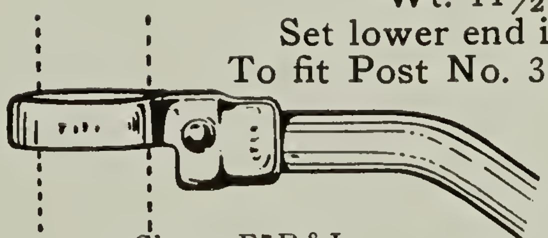


Clamp F4R&L

X3 — $1\frac{5}{16}$″ x 8′ Galvanized Brace

Wt. 11½ lbs.

Set lower end in cement. To fit Post No. 3, 2⅜″ Diam.

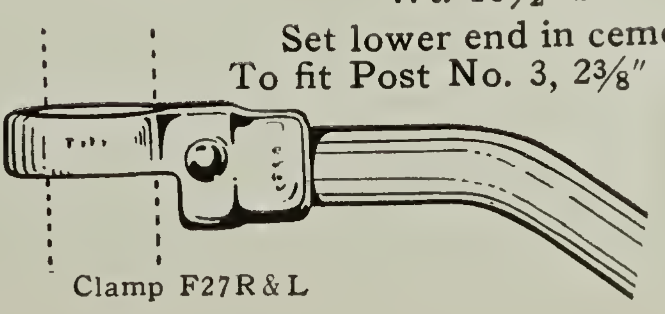


Clamp F7R&L

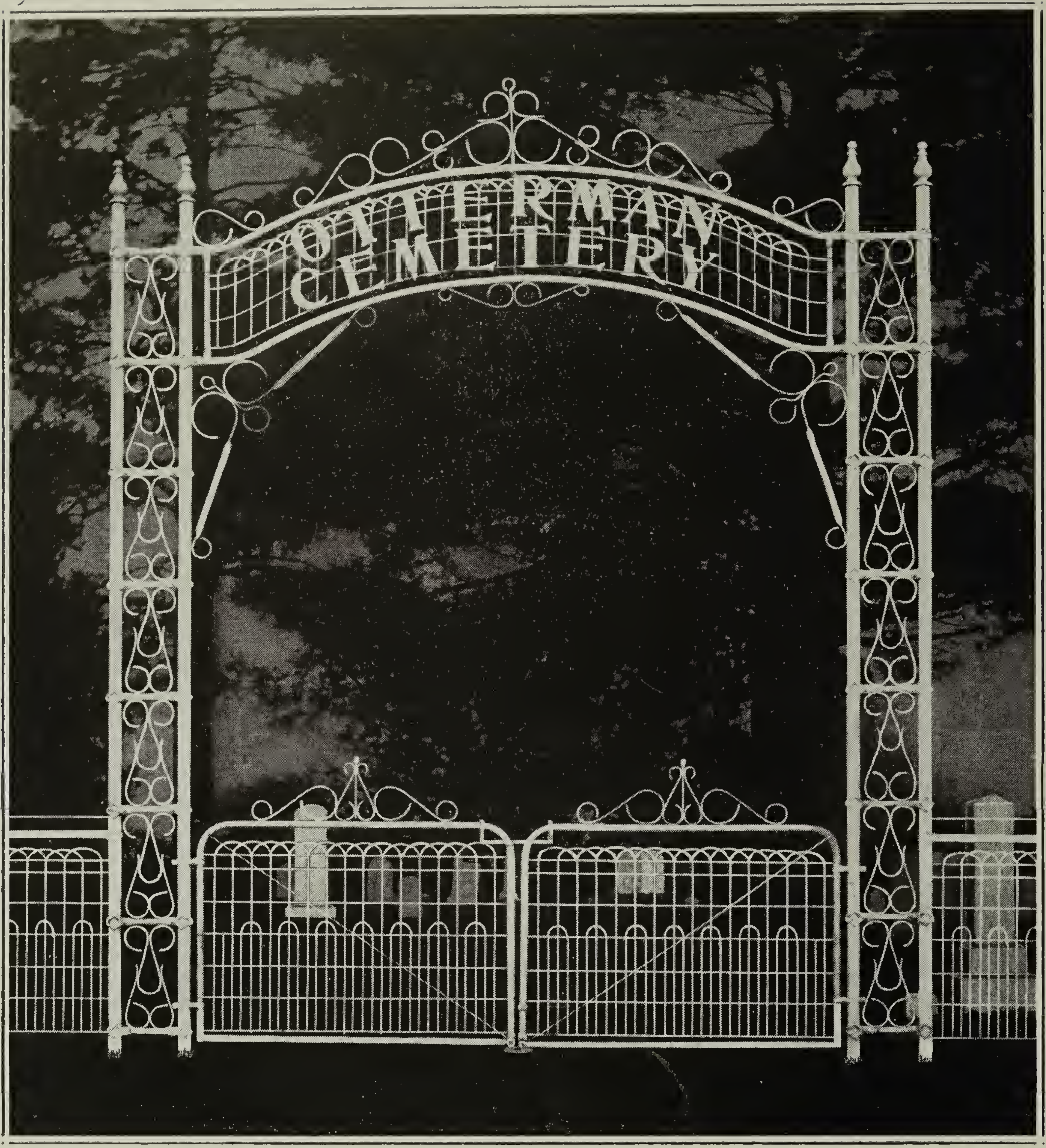
X4 — 1⅝″ x 10′ Brace Galvanized

Wt. 16½ lbs.

Set lower end in cement. To fit Post No. 3, 2⅜″ Diam.



Clamp F27R&L



Style "B" Arch

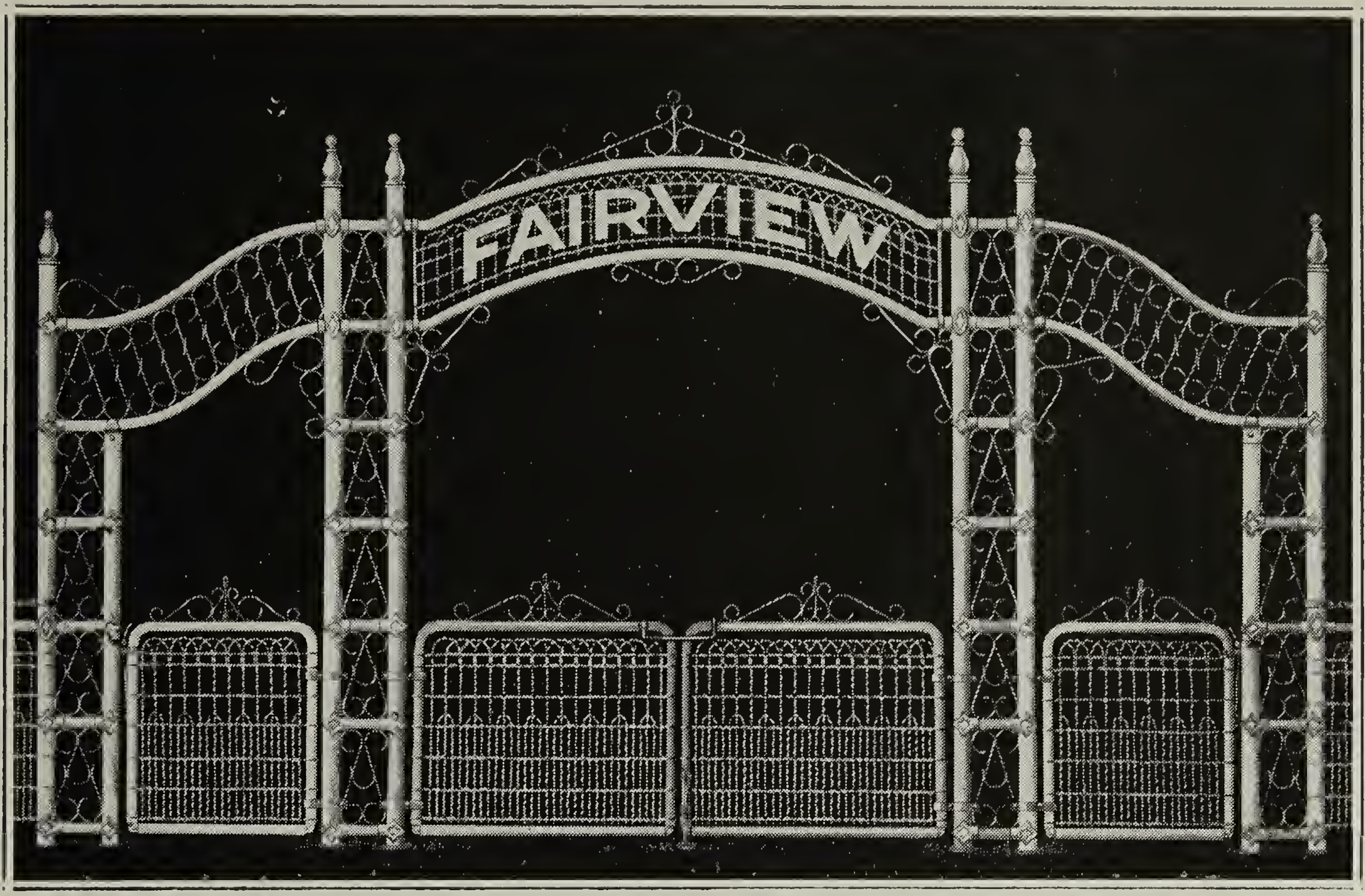
Galvanized Finish

NOTHING is more appropriate for the modern, well kept cemetery than the CLAY Cemetery Entrance Arch as shown above. Cemetery Associations are using CLAY Arches with the Cumberland and Olympic Fence to provide attractive, permanent, impressive entrances to their grounds.

Arches illustrated in this book can be furnished for any purpose and with any lettering desired.

CLAY electro galvanizing produces an attractive finish of lustrous zinc that is as permanent as can be made.

Its substantial construction will find continued favor with all persons who have an interest in the prestige, which this handsome arch lends to their cemetery.



Style "C" Arch

THE CLAY Style C Arch is without doubt the most beautifully designed arch ever made. Truly the result of an artistic inspiration of a master craftsman. The exquisite grace, the outstanding beauty of this durable arch will stand indefinitely. Equally important, the selection of this model arch for cemetery entrances, will give notice to the rising generation of what proper commemoration really is.

Highly ornamented with heavy scroll work in the panels. It is also of really substantial and rigid construction.

Standing at the front entrance it presents an attractive, dignified appearance to all who pass or enter.

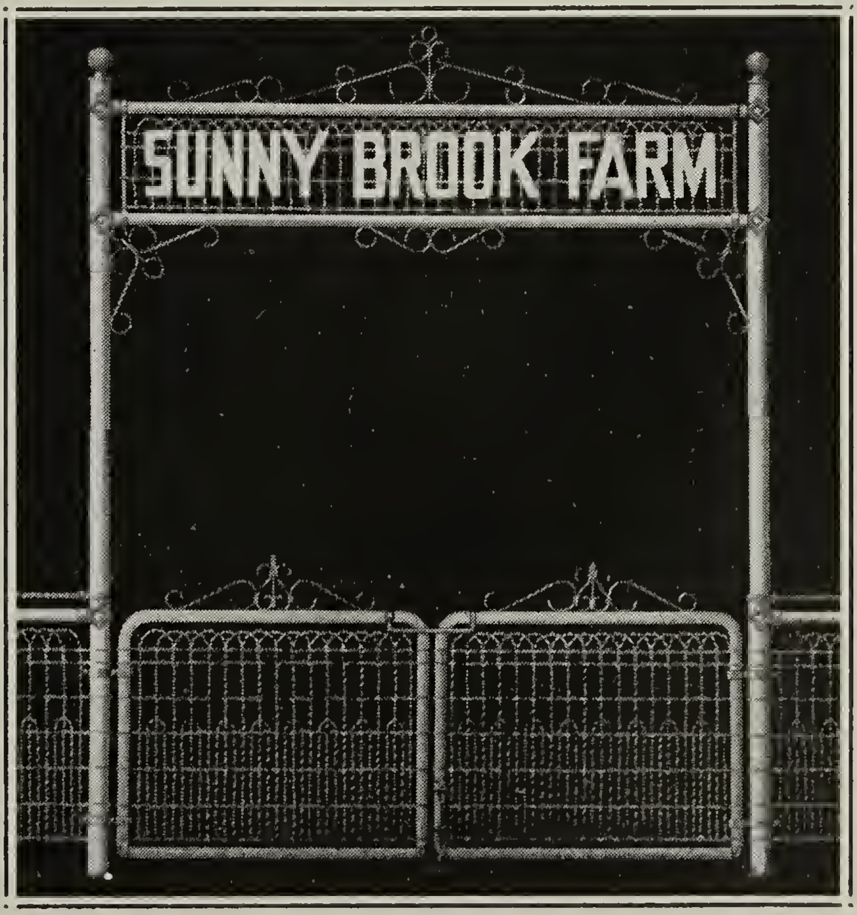
Style "A" Arch

No more pleasing custom has arisen in recent years than that of giving the farm home an individual name. And it is becoming increasingly popular. The massive steel CLAY Arch bearing the name of the farm in bold but artistic letters is a natural outgrowth of this movement.

The arch not only provides an attractive front entrance, but it also notifies the public in an impressive way that the proprietor is in the front line of progressive land owners.

The standard size arches fit openings 8 ft., 10 ft., and 12 ft. The overall height of the arch is 14 ft. Clearance 10 ft. 6 in. unless ordered higher at slight extra cost.

The CLAY Style L Drive Gates are used in all styles of large arches.



General Specifications for Arches A, B and C

UPRIGHT TUBING — 2⅜ inches, O. D.

HORIZONTAL TUBING—1$\frac{5}{16}$ in. O. D.

MALLEABLE CLAMPS — All connections made with ornamental malleable clamps.

SCROLL WORK—Heavy wrought iron, securely riveted.

POST TOPS—Equipped with round ball, tall ornament, as on style C in illustration, or cross if desired.

CLEARANCE — 10 feet 6 inches, unless built higher to order.

HEIGHT OVERALL — 14 feet.

TOP PANELS — 1$\frac{5}{16}$ in. O. D., tubing.

FENCE FASTENERS — Wire clips furnished for fastening any Fence to Arch.

WIRE FABRIC — Galvanized Ornamental Fabric. No. 9½ pickets, No. 12½ laterals, with bottom spacing of 1⅜ inches.

CENTER GATE — Style L with special hinges AP3.

SIDE GATES — For Style C Arch only. No. OS7 Gates with special hinges.

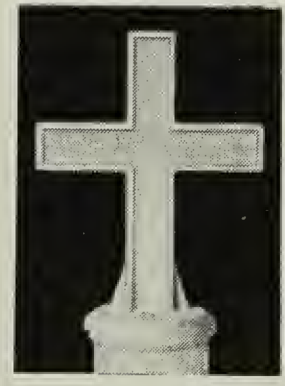
FINISH — Electro Galvanized.

LETTERS — 8″ aluminum metal, embossed and everlasting. Can be finished in gold leaf at extra charge.

WEIGHT — Estimated shipping weight based on 12-foot opening, complete with gates; Style A Arch, about 375 lbs., Style B Arch, about 650 lbs.; Style C Arch, about 1,000 lbs.

NOT CARRIED IN STOCK — All Arches are made up after receipt of order and are not carried in stock. We cannot accept countermand on any order for Arches.

INSTRUCTIONS FOR ORDERING—Arches are not included as fence and are charged for separately. Figure amount of fence needed, not including space for arch and add cost of arch.



Cross post cap as illustrated will be supplied without extra charge, in place of ball caps when so specified.

Large cross, built into center scroll over lettered panel for A, B or C Arch at small extra.

When estimating complete fence and Entrance Arches do not charge fence footage for space occupied by Arch. To calculate space occupied by Arch add width of gates and add 15 inches for each double pipe column.

Points of Superiority in Clay Complete Ornamental Fence

All End, Corner, and Gate Posts are special high carbon steel tubing. Electro-Galvanized finish.

All Top Rail is heavy tubing made continuous by permanent inside splice couplings. Electro-Galvanized finish.

All Line Posts are made of two steel tubes held one inch apart or heavy single posts. Electro-Galvanized finish.

All Ornamental Fabric made from copper bearing galvanized wire.

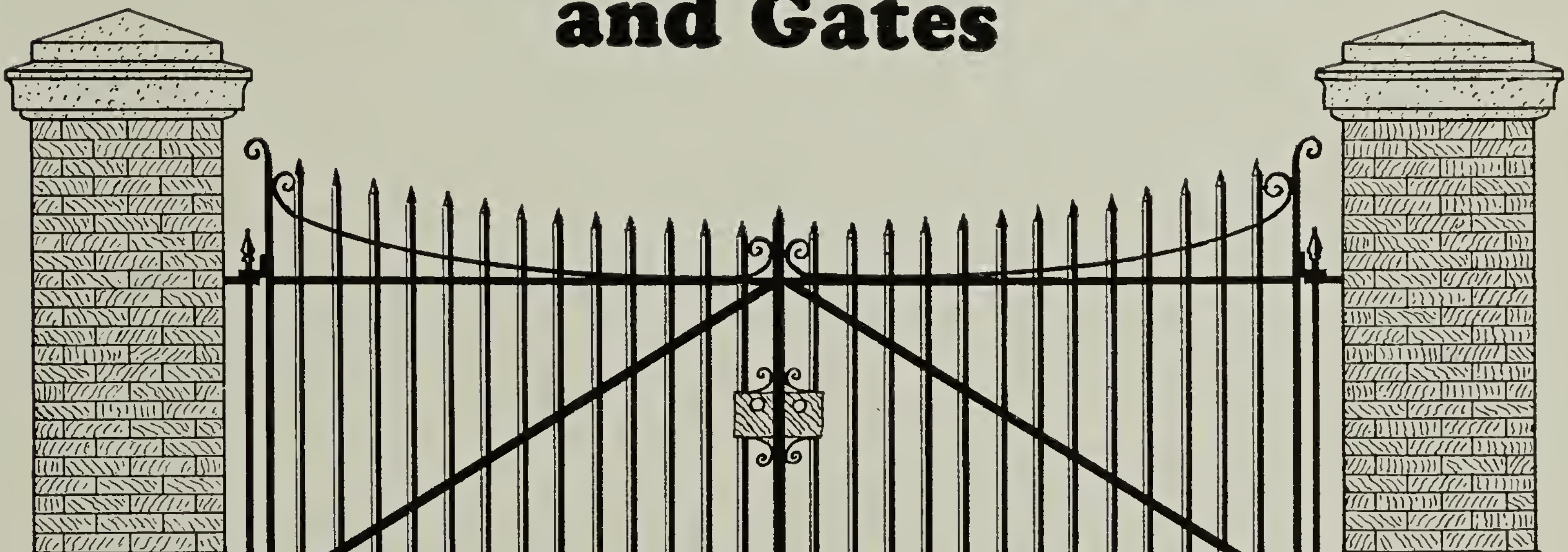
All Castings and Fittings specially designed for the use intended and add beauty to the fence. Heavily Galvanized.

All Gates and Arches built to same pattern as fence.

Ask for Special Fence Catalog.

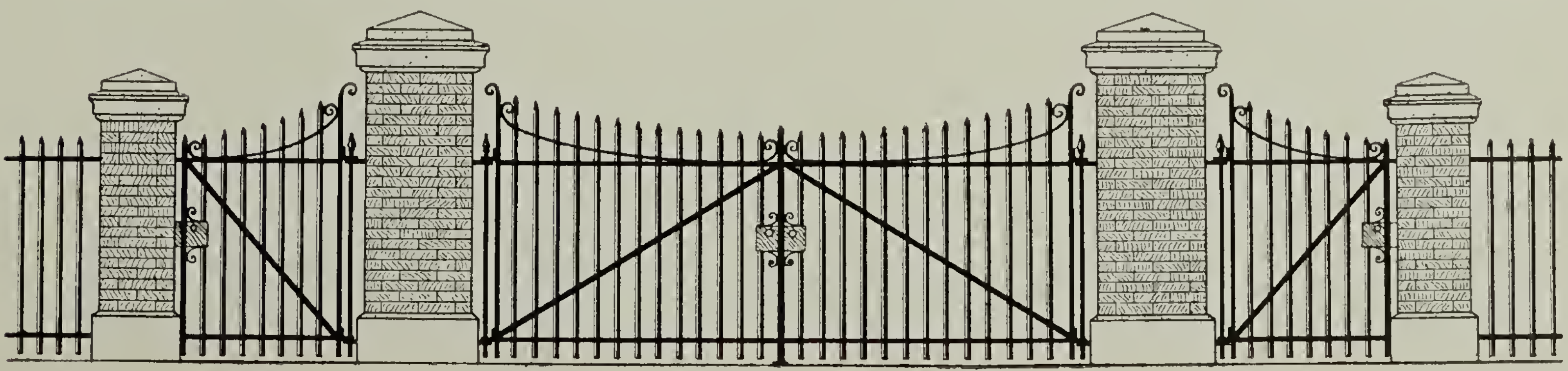
Illustrates CLAY Chain Link Fence installation for Botsford Lumber Company, Owatonna, Minn. Ask for Chain Link Fence Catalog No. 301.

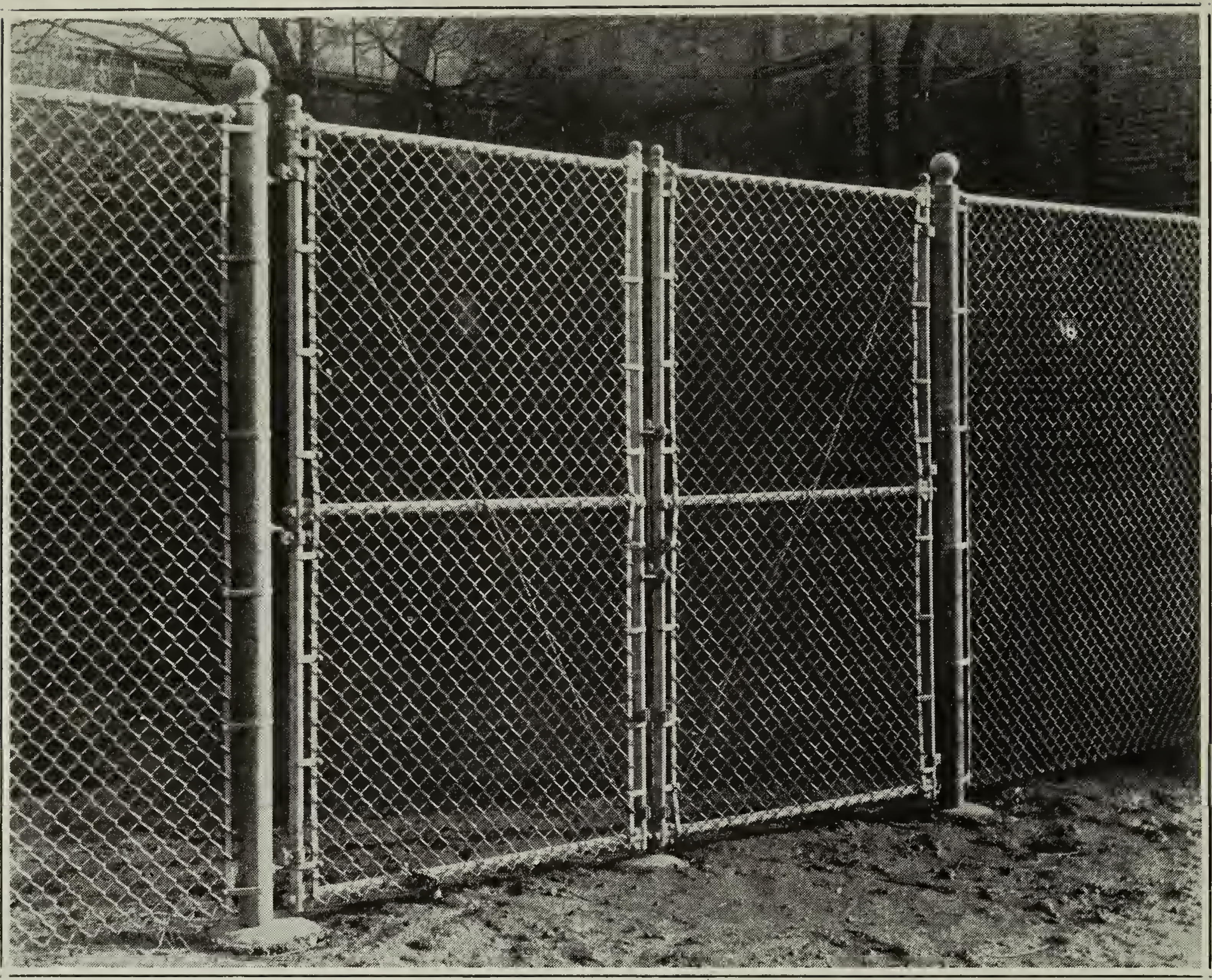
Clay Iron Picket Fence and Gates



The two illustrations show only one of many designs of CLAY ornamental iron picket fence with gates. Write for catalog, which shows our large complete line of very beautiful patterns in handsome pictures and full descriptions.

This type of fence is parrticularly adapted to large estates, parks and cemeteries.





Clay Chain Link Fence

Ask for Cat. No. 301

Made in various types and weights and can be supplied in any height up to 11 feet.

ATTRACTIVE APPEARANCE.

SAFETY FROM TRESPASS.

SMALL DEPRECIATION.

RUST-PROOF GALVANIZED FINISH.

DEPENDABLE QUALITY.

It is impossible to give the proper amount of space to chain link fence in this catalog. Complete information sent upon request.

We solicit your inquiries—send plan with measurements, showing gate openings, height whether with or without barb wire trespass guard.

Our engineering department at your service. Ask for fence catalog No. 301.

Clay Equipment Corp.
Cedar Falls, Iowa

Some of Its Many Uses

◆

Golf Courses
School Yards
Athletic Fields
Institutions
Power Stations
Tennis Courts
Jail Yards
Etc.

PORTABLE CLOTHES DRYER

Appeals to every woman. Easy to handle. Arms quickly raised like an umbrella. Drier turns with the breeze, thus clothes cannot tangle or whip like on straight lines. Every piece has equal chance at air and sunlight — dries washing evenly and spotlessly clean.

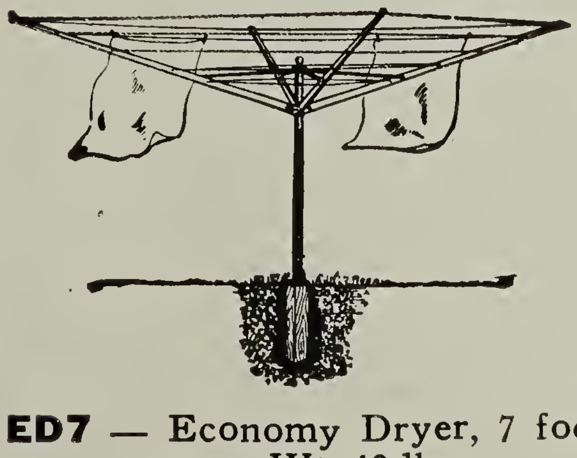
Entire washing hung without step or lift. Lines come to you, eliminating dragging heavy, wet clothes a hundred feet or more. No tramping through wet grass. Drier is conveniently stored away leaving yard free of cumbersome poles and sagging lines. Beautifies the home grounds.

Ideal for small yards. 135 feet of line. Adjusted by spring-latch, line is always tight. All castings are malleable, galvanized and varnished to resist rust. Line: Finest grade solidly braided sea island cotton. Braces: Angle iron, not merely wood. Arms: Selected straight grain Norway pine, finished in beautiful lustrous goldenrod. Fittings all galvanized and varnished. Ground mounting, steel casing with weather cap, to be set in cement.

Guaranteed for one year. Packed in dust-proof carton. Shipping weight, 40 pounds.

CSD7 — Sunshine Dryer, 7 ft. arms. Wt. 40 lbs.

Clay Economy Dryer



ED7 — Economy Dryer, 7 foot arms. Wt. 40 lbs.

The CLAY Economy Drier combines good quality with extremely low price. Is quickly installed. Well constructed, handsomely finished, indeed, a very salable article.

1. Line — 135 feet good grade long fiber, twisted cotton.
2. Braces — Extra strong flat steel ¼" x ¾", finished black enamel.
3. Tension Adjustment — Malleable casting that slides up and down center post. Thumb screw holds arms in desired position. Line always tight.
4. Arms — Exceptionally durable straight grain Norway Pine. Finish, bright goldenrod enamel.
5. Centerpost — 2 inch reclaimed steel flue pipe. Galvanized to prevent rust.
6. Metal Cap — Keeps leaves and dirt out of the ground box.
7. Ground Mounting — 2 foot long wooden box. Fittings inside hold Drier rigidly permitting post to turn with reel.

FREIGHT CLASSIFICATION

Classification of Clay Steel Products is as Follows

	Class West	Class East
Barn Ventilator, Galvanized Sheet Iron	1	1½
Fresh Air Regulator, Galvanized Sheet Iron	1½	D1
Foul Air Outtake Flues, Galvanized Sheet Iron, Telescoping style	1	1½
Foul Air Outtake Flues, Galvanized Sheet Iron, Not Telescoping	1½	D1
Poultry and Hog House Ventilators, Completely set up	1½	D1
Poultry and Hog House Ventilators, Style SH12-15-18, SH12A-B-C	1	1½
Window Frames, Metal	2	2
Rolled Ribbed Glass	4	3
Galvanized Sheet Metal Window Parts	2	2
Iron Stanchions	3	3
Iron Stalls	3	3
Pipe Rail. Iron pipe	4	4
Stanchion Parts	3	3
Stall Parts. Iron	3	3
Automatic Water Bowls	2	2
Barn Columns. Iron Pipe	4	4
Cast Iron Caps	4	4
Manger Divisions. Galv. Iron. Cstgs. Att.	3	3
Pen Panels	3	3
Corner Hay Feeding Racks	1	1½
Cast Iron Feed Boxes	3	
Horse Stall Guards	3	3
Litter Carriers. Bundled, 1 tub, hoist, 1 bale	1	2
Swill Carrier	1	2
Ensilage Carrier	1	2
Rigid Carrier Track	3	3
Rigid Track Hangers	3	3
Steel Posts and Brackets	3	3
Swinging Boom	3	3
Carrier Track Switches	3	3
Carrier Track Terminal Hanger	3	3
Carrier Track Anchor Cable	3	3
Wire Rod Track	4	4
Hog Pen Gates	3	3
Wall Farrow Rails	3	3
Cast Iron Troughs	3	3
Wire Fence Gates	3	3
Iron Fence Braces	4	4
Fence Posts	4	4
Iron Pipe	4	4
Wire Fence. Iron Wire	3	
Wire Cable	4	4
Fence Material. Fittings	3	
Clothes Line T Posts	4	4
Arch and Gate	3	3
Ventilating Skylights	D1	D1
Wire Window Guards	3	3
Louvres. Galvanized Sheet Metal and Wire Screen	2	2
Electric Fan Cabinets	1½	D1
Flax Fiber Insulation	2	2
Galvanized Iron Flue Pipe	3	3
Stable Stacks S. U. Not Nested	1½	1½
Sheet Metal Boots, S. U.	1½	1½
Sheet Metal Elbows, S. U.	1½	1½

The Western Classification will apply to points in the states West of the Mississippi River .The official or Eastern Classification will apply to states East of Mississippi River.

ESTIMATED FREIGHT RATES

Accuracy Not Guaranteed

You will find below a selected list of typical shipping points in various states to inform you as to the approximate freight rates on CLAY Steel Products. These rates do not include changes in Iowa Inter-State rates contemplated for 1931.

NEW YORK

	1st Class	2nd Class	3rd Class	4th Class
New York City	1.965	1.685	1.29	.91
Buffalo	1.53	1.27	1.005	.76
Albany	1.90	1.625	1.245	.885
Olean	1.53	1.27	1.005	.76
Bath	1.70	1.45	1.115	.79

PENNSYLVANIA

	1st Class	2nd Class	3rd Class	4th Class
Philadelphia	1.945	1.665	1.27	.895
Pottsville	1.945	1.665	1.27	.895
Harrisburg	1.935	1.655	1.26	.885
Williamsport	1.935	1.655	1.26	.885

MINNESOTA

	1st Class	2nd Class	3rd Class	4th Class
Winona	.835	.64	.485	.335
Albert Lea	.61	.52	.365	.305
Faribault	.82	.69	.535	.335
Minneapolis	.835	.69	.535	.335
St. Cloud	.99	.835	.67	.43
Wadena	1.305	1.145	.915	.595
Moorhead	1.51	1.28	1.06	.83
Duluth	.99	.835	.67	.43
Preston	.87	.715	.52	.385
Worthington	.915	.69	.52	.42
Granite Falls	1.11	.93	.78	.485

INDIANA

	1st Class	2nd Class	3rd Class	4th Class
South Bend	1.155	.955	.755	.57
Logansport	1.125	.925	.735	.55
Indianapolis	1.175	.97	.77	.575
Ft. Wayne	1.175	.97	.77	.575

MICHIGAN

	1st Class	2nd Class	3rd Class	4th Class
Lansing	1.37	1.135	.90	.695
Detroit	1.31	1.085	.86	.645
Kalamazoo	1.215	1.005	.795	.595
Grand Rapids	1.29	1.065	.845	.635
Saginaw	1.36	1.125	.89	.67

NORTH DAKOTA

	1st Class	2nd Class	3rd Class	4th Class
Grand Forks	2.045	1.72	1.385	1.005
Minot	2.585	2.10	1.725	1.275
Bismarck	2.355	1.985	1.555	1.115

SOUTH DAKOTA

	1st Class	2nd Class	3rd Class	4th Class
Sioux Falls	.87	.705	.505	.395
Watertown	1.185	1.06	.81	.65
Huron	1.51	1.245	.94	.67
Aberdeen	1.58	1.37	.97	.73
Yankton	1.215	.99	.715	.52

KANSAS

	1st Class	2nd Class	3rd Class	4th Class
Topeka	1.29	1.10	.90	.71
Pittsburgh	1.50	1.28	1.05	.83
Wichita	1.68	1.43	1.18	.92
Garden City	1.96	1.67	1.37	1.08

ILLINOIS

	1st Class	2nd Class	3rd Class	4th Class
Rockford	.87	.70	.52	.385
Sterling	.87	.70	.52	.385
Joliet	.87	.70	.52	.385
Peoria	.87	.70	.52	.385
Springfield	.87	.70	.52	.385
Champaign	.93	.78	.57	.395

WISCONSIN

	1st Class	2nd Class	3rd Class	4th Class
Madison	.87	.70	.52	.385
Fond Du Lac	.915	.76	.61	.41
Wisc. Rapids	.915	.76	.61	.41
Chippewa Falls	.915	.76	.61	.41
Sparta	.835	.69	.535	.335
Phillips	1.245	1.035	.81	.64

COLORADO

	1st Class	2nd Class	3rd Class	4th Class
Denver	2.325	1.825	1.46	1.175
Pueblo	2.325	1.825	1.46	1.175

IDAHO

	1st Class	2nd Class	3rd Class	4th Class
Idaho Falls	3.71	3.12	2.66	2.18
Twin Falls	3.945	3.35	2.865	2.39

UTAH

	1st Class	2nd Class	3rd Class	4th Class
Salt Lake City	3.57	2.97	2.58	2.10
Price	3.57	2.97	2.58	2.10

MONTANA

	1st Class	2nd Class	3rd Class	4th Class
Billings	3.75	3.135	2.54	2.04
Great Falls				

WASHINGTON

	1st Class	2nd Class	3rd Class	4th Class
Spokane	4.95	4.28	3.57	3.00
Everett	4.95	4.28	3.57	3.00

OKLAHOMA

	1st Class	2nd Class	3rd Class	4th Class
Tulsa	1.89	1.61	1.32	1.04
Oklahoma City	1.99	1.69	1.39	1.09
Enid	1.91	1.62	1.34	1.05
Ardmore	2.20	1.87	1.54	1.21

OREGON

	1st Class	2nd Class	3rd Class	4th Class
Portland	4.95	4.28	3.57	3.00
Eugene	4.95	4.28	3.57	3.00

TEXAS

	1st Class	2nd Class	3rd Class	4th Class
Dallas	2.30	1.96	1.61	1.27
Wichita Falls	2.26	1.92	1.58	1.24

MISSOURI

	1st Class	2nd Class	3rd Class	4th Class
St. Louis	.93	.78	.57	.43
Jefferson City	1.295	1.055	.73	.52
Kansas City	.915	.69	.535	.415
Albany	.915	.69	.535	.415
Bucklin	.915	.69	.535	.415

OHIO

	1st Class	2nd Class	3rd Class	4th Class
Toledo	1.25	1.035	.82	.615
Lima	1.22	1.01	.80	.60
Cleveland	1.34	1.11	.88	.66
Columbus	1.28	1.06	.84	.63

IOWA

	1st Class	2nd Class	3rd Class	4th Class
Algona	.508	.428	.336	.252
Atlantic	.78	.565	.425	.35
Burlington	.51	.40	.305	.245
Charles City	.295	.25	.20	.15
McGregor	.564	.48	.392	.304
Sheldon	.63	.475	.36	.295
Sioux City	.68	.505	.385	.31
Ft. Dodge	.36	.305	.24	.18
Dubuque	.365	.31	.245	.185
Cedar Rapids	.315	.27	.21	.16
Washington	.45	.36	.28	.215
Des Moines	.385	.325	.25	.105
Denison	.52	.41	.32	.26
Ottumwa	.585	.445	.34	.27
Clinton	.485	.385	.295	.235
Council Bluffs	.875	.63	.475	.40
Creston	.776	.628	.494	.39

NEBRASKA

	1st Class	2nd Class	3rd Class	4th Class
Lincoln	.995	.885	.73	.535
Hastings	1.52	1.285	1.065	.88
Fremont	1.20	1.015	.835	.725
North Platte	1.75	1.48	1.22	1.055
Randolph	1.655	1.335	1.06	.81
O'Neill	1.81	1.46	1.17	.92
Oshkosh	1.93	1.635	1.35	1.16
Ord	1.84	1.485	1.19	.985

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Printed by Stewart-Simmons Co., Waterloo, Iowa

CLAY

VENTILATION *for* FARM BUILDINGS

Catalog No. 20

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ELECTRIC VENTILATION
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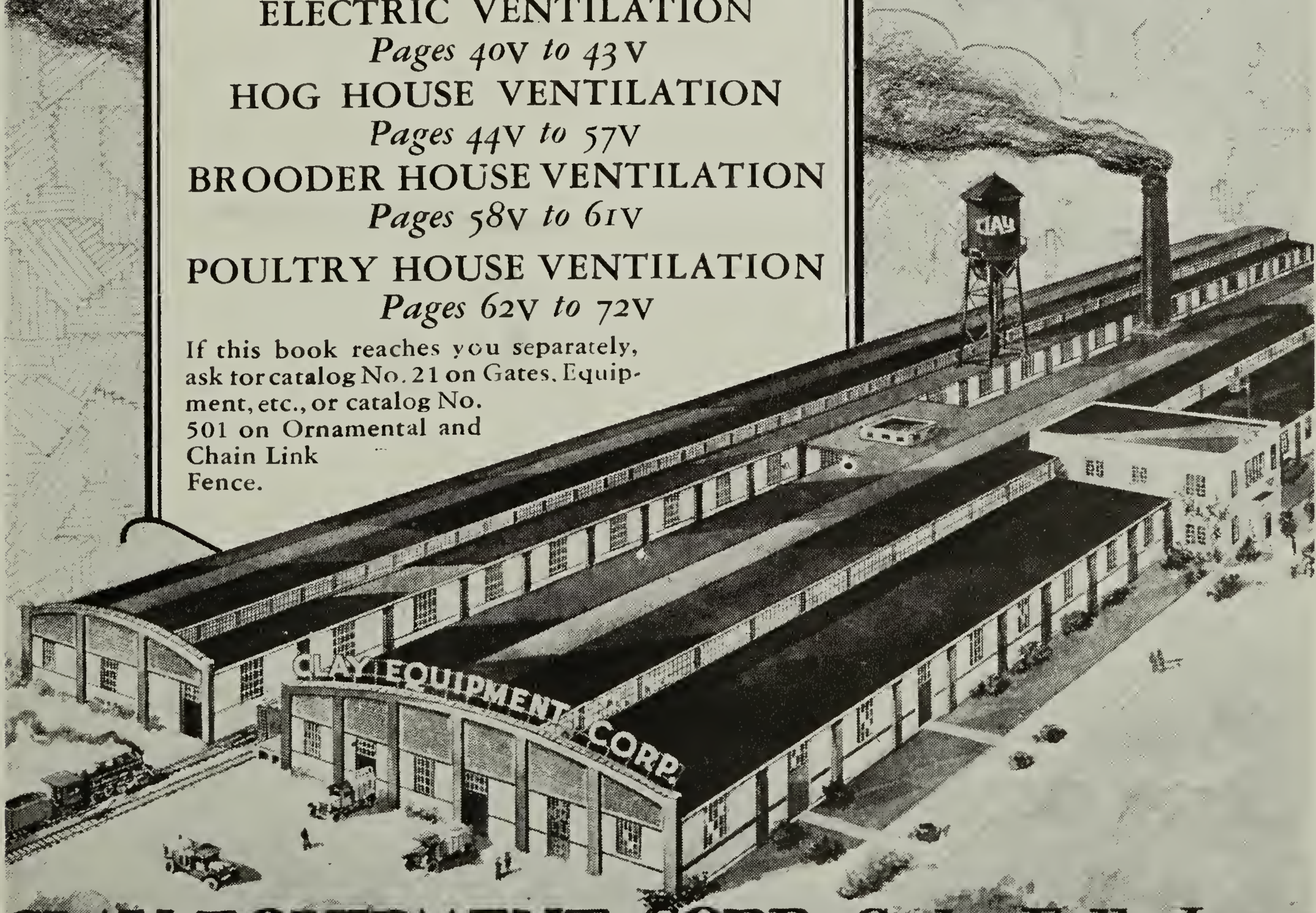
POULTRY HOUSE VENTILATION
Pages 62V to 72V

If this book reaches you separately, ask for catalog No. 21 on Gates, Equipment, etc., or catalog No. 501 on Ornamental and Chain Link Fence.



CLAY EQUIPMENT CORP. Cedar Falls, Iowa

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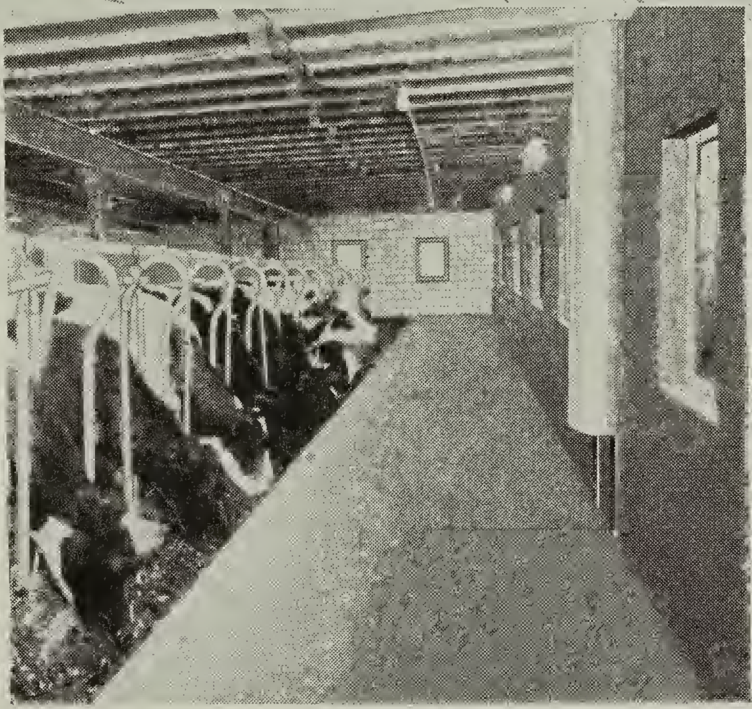
This Good Barn Made Better With CLAY Ventilation

June Pasture Conditions in Midwinter

Pure, Fresh, Tempered Air



WARMTH, dryness and a comfortable stable. If you provide these when King Winter rules out-doors, you will be assured June-like production at a time when milk brings you the biggest price.

Dairymen know from stern experience that fresh, clean air is indeed the most vital factor to cow health and profitable production. They know that foul, damp stables are most disastrous to worthwhile dairy profits.

So long as you hope to make a cent of profit in the dairy business you must be mindful that milk and butter production depend absolutely and completely on cow health and vitality.

Cow health and vitality depend mostly on one thing: On your providing a sufficient volume of fresh air—thus maintaining a high degree of air purity in the stable. The only safe means of supplying fresh, tempered air is by an efficient *self-regulating* system of ventilation.

The benefits resulting—prevention of disease, better cow health, better utilization of feed, higher production, protection against rapid building deterioration and last but not least the priceless satisfaction that yours is a "Health Barn" where human food is produced, will exceed many times your investment in a ventilating system.

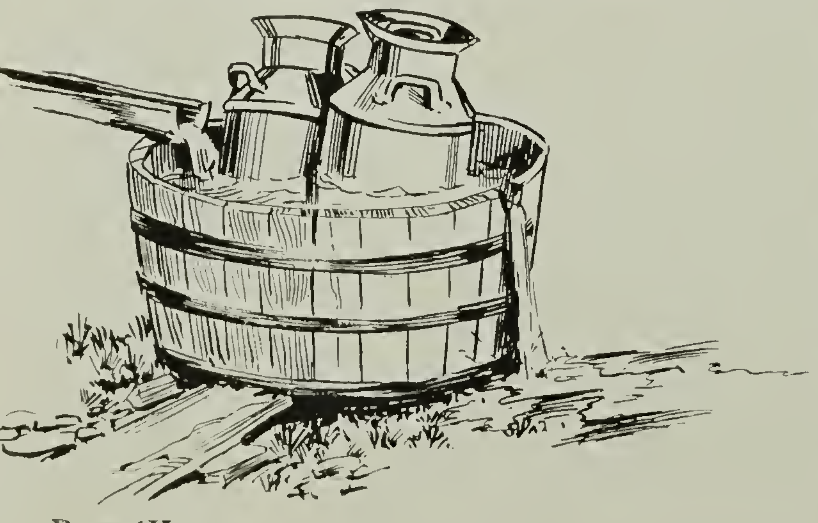
Let us not lose sight of the fact that the cow is a living creature, with heart and lungs and digestive organs which nature has given her. That she, like you and me, is dependent for health and life on invigorating sunlight, fresh pure water, wholesome feed and CLEAN AIR.

I am a Good Cow, but—

WHAT chance do I have to show my real worth? As you can see my owner stables me and eleven herd-mates in a gloomy, smelly, unventilated stable, tied in uncomfortable stalls.

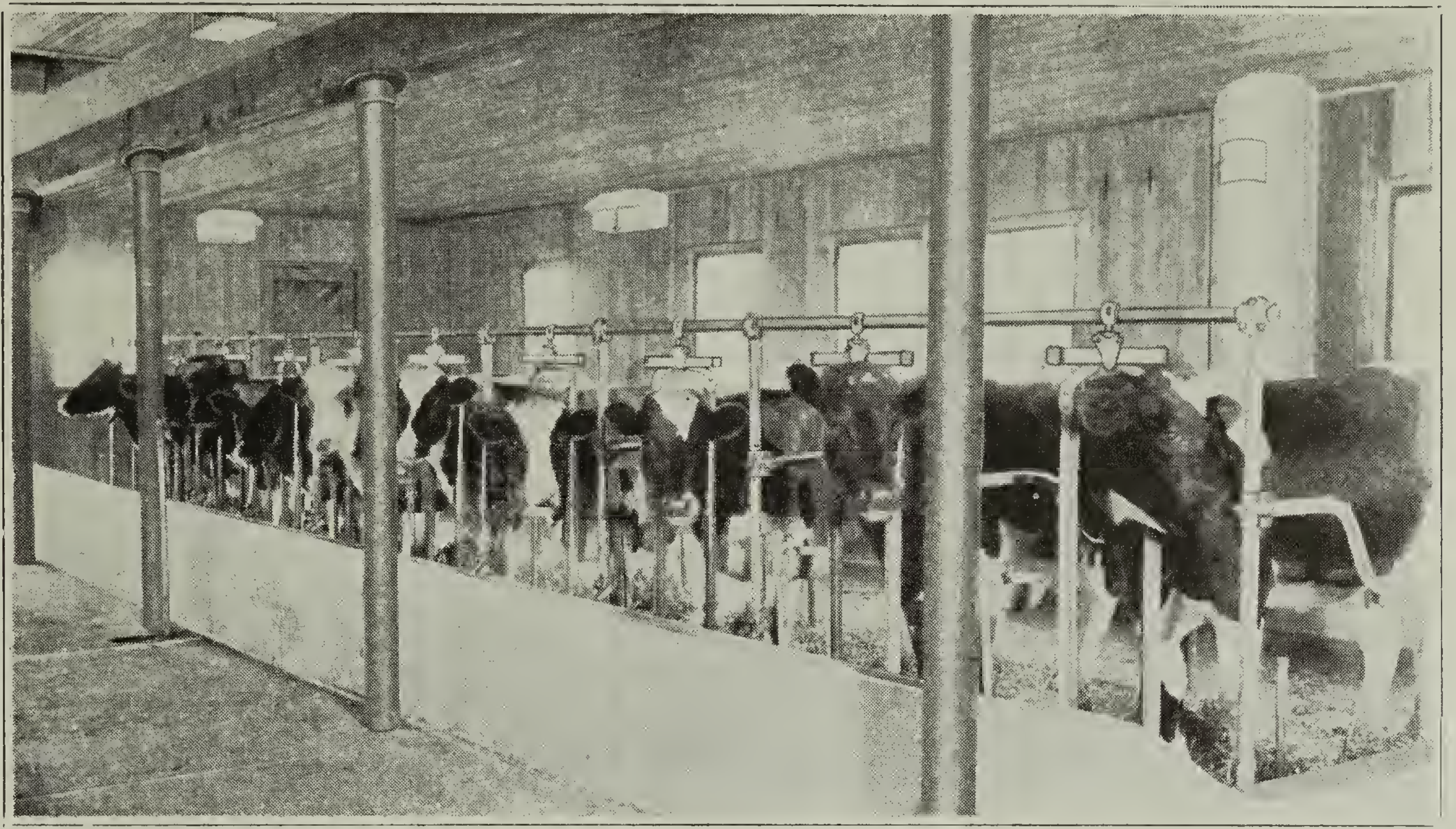
Under these conditions we are logy, fretful and nervous. Our misery is greatest at night. The stable doors are shut tight to keep the cold blasts from blowing in on us. The only breath of fresh air that finds its way into our stable seeps in through the few cracks and around the windows.

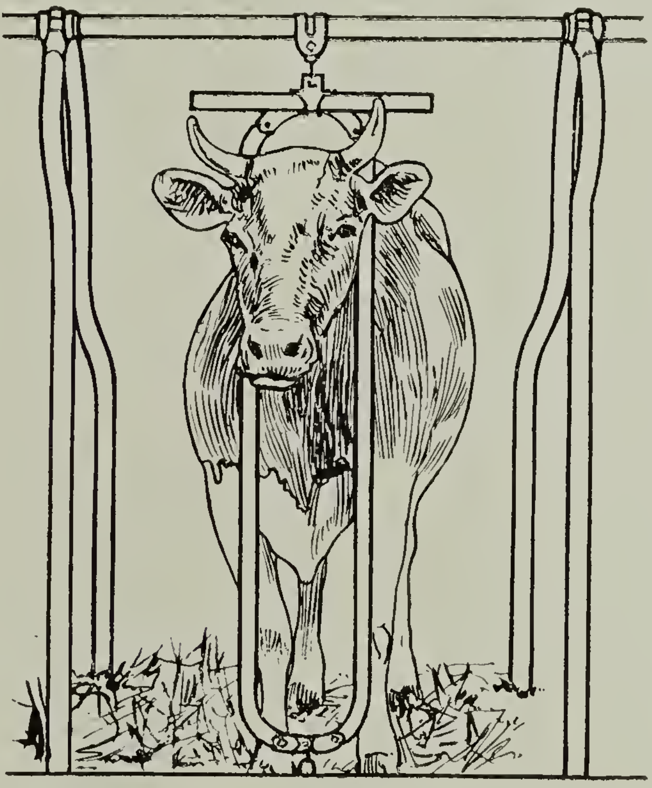
In this dark steaming stable we are forced to stay. We are tired, thirsty, and gasping for air. Our bellies are loaded heavy with feed intended to swell our milk bags—but it won't.



Without a sufficient supply of oxygen to burn that feed and to properly assimilate it, we can't make a good showing at the milk pail.

The long hard winter is dragging us down in health. It has been below zero for over a week—the stable is thick with steam, and our hides are wringing wet. Little wonder disease and infection fastens its grip on us when we are forced out-doors in the frost bitten air.



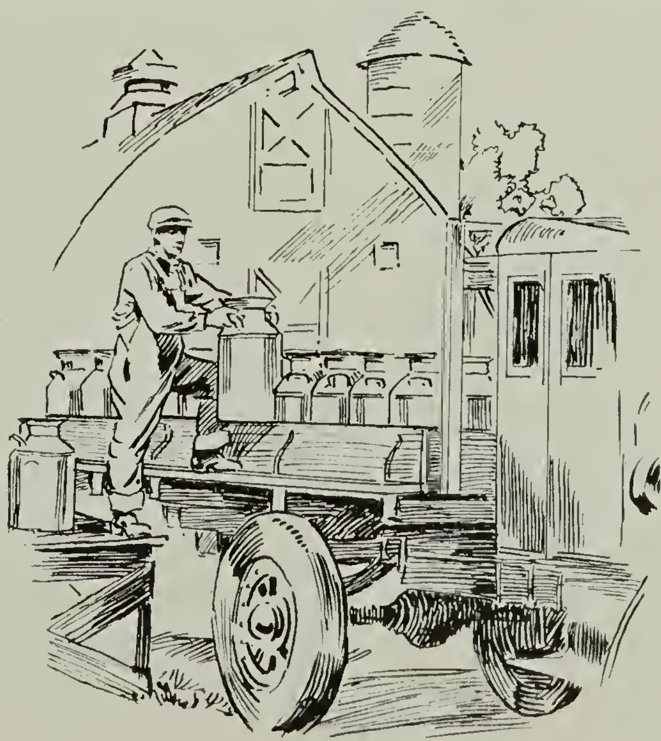


I am a Good Cow, and—

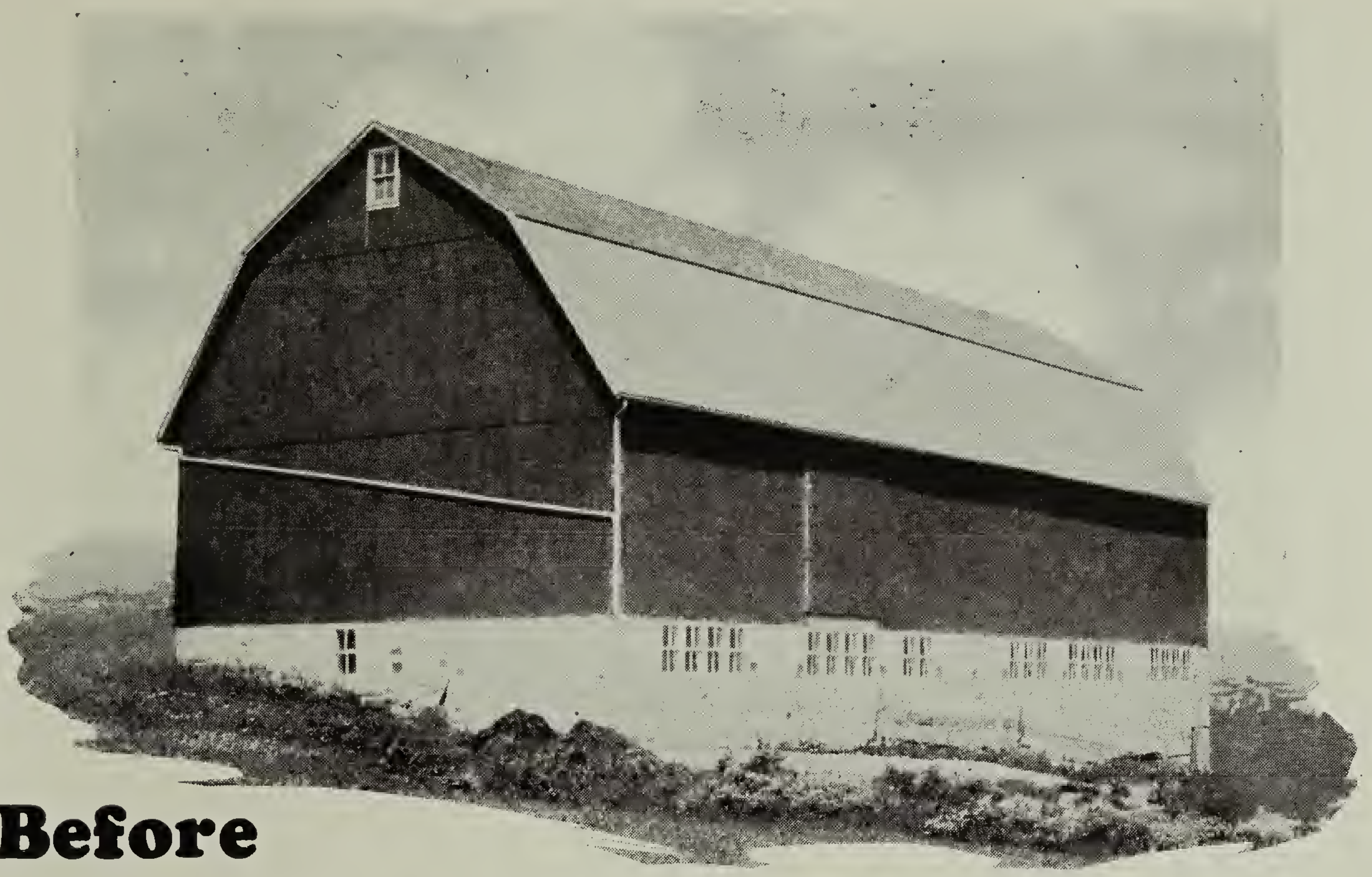
MY owner is giving me every chance in the world to show how good I am. He keeps me with eighteen other profit-makers in this well-lighted, clean and well-ventilated stable. You can just see how clean and dustless the air is all around us.

We do not shrink at the milk pail during cold spells. Our stalls are comfortable and the stable environment is always cozy, no matter if winter winds whip out-doors. There is a continuous inflow of fresh air through self regulating intakes near the ceiling. Mind you—no cold blasts ever blow over our bodies, but always the same even, smooth soft flow of invigorating air reaches our nostrils. Seems to make no difference if the weather is mild or stormy outdoors.

Fresh pure air both day and night livens our spirit, keeps our lungs expanded, our blood clean and enables us to digest and properly assimilate food, converting it into healthy milk and profits for our owner.



Another Good Barn—
CLAY Ventilation

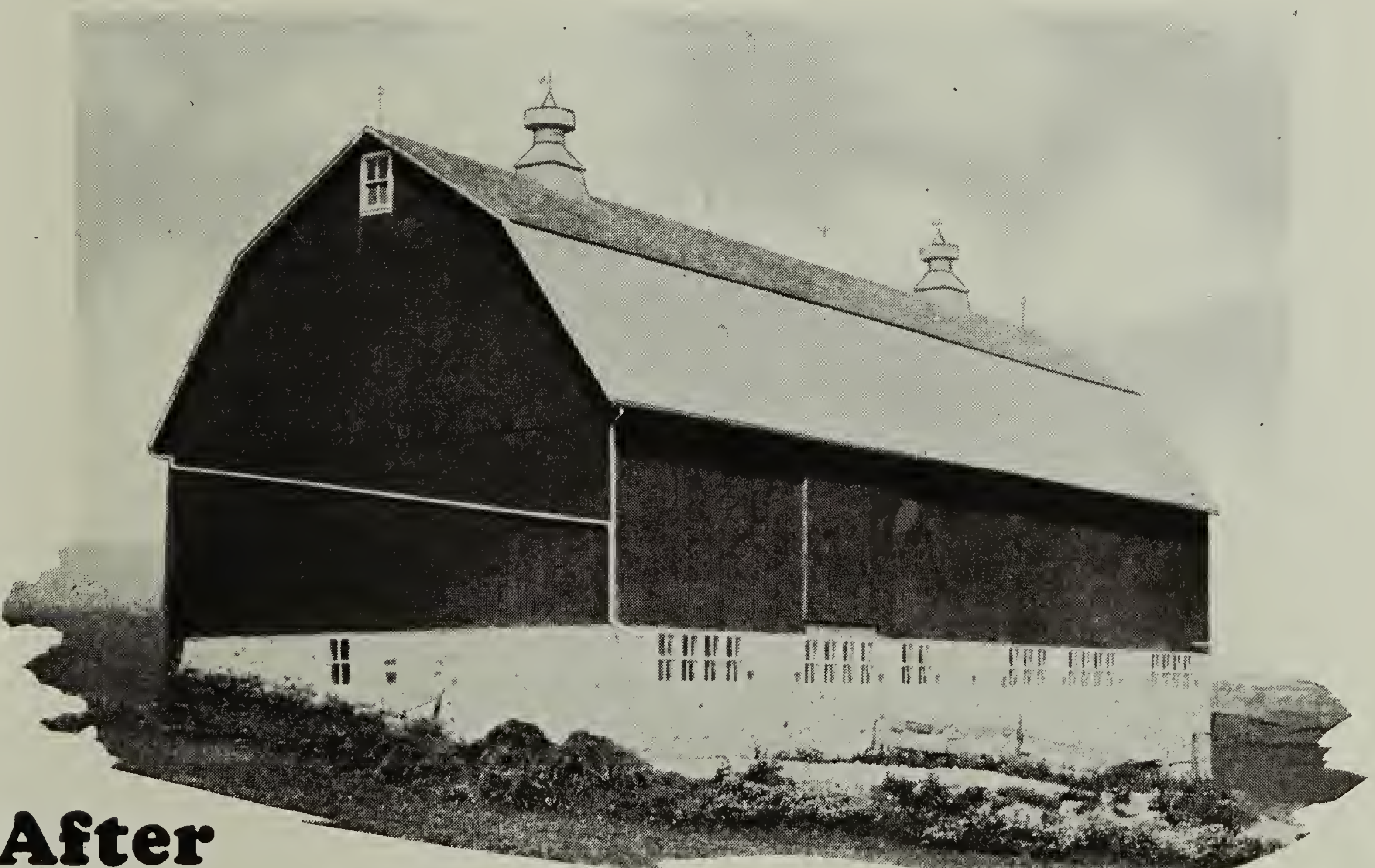


Before

Note the unfinished appearance of this dairy barn.

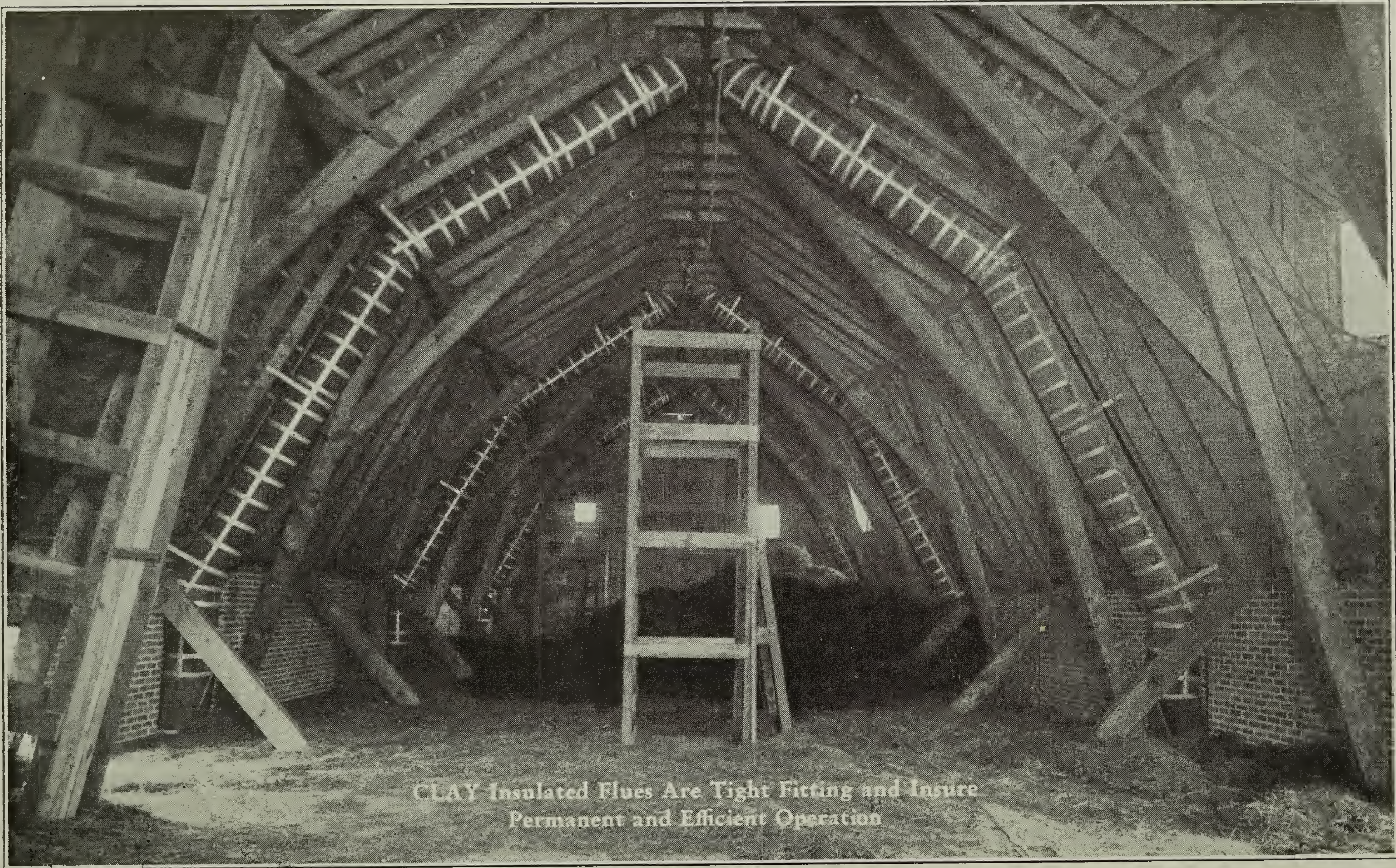
True, it is well built, nicely proportioned and yet to the passersby it consists merely of four walls and a roof—the same as thousands of other barns the country over.

No outward mark to distinguish this farmer's barn from that of his neighbors. No sign that here lives a dairyman proud of his possessions, his profession and prosperity.

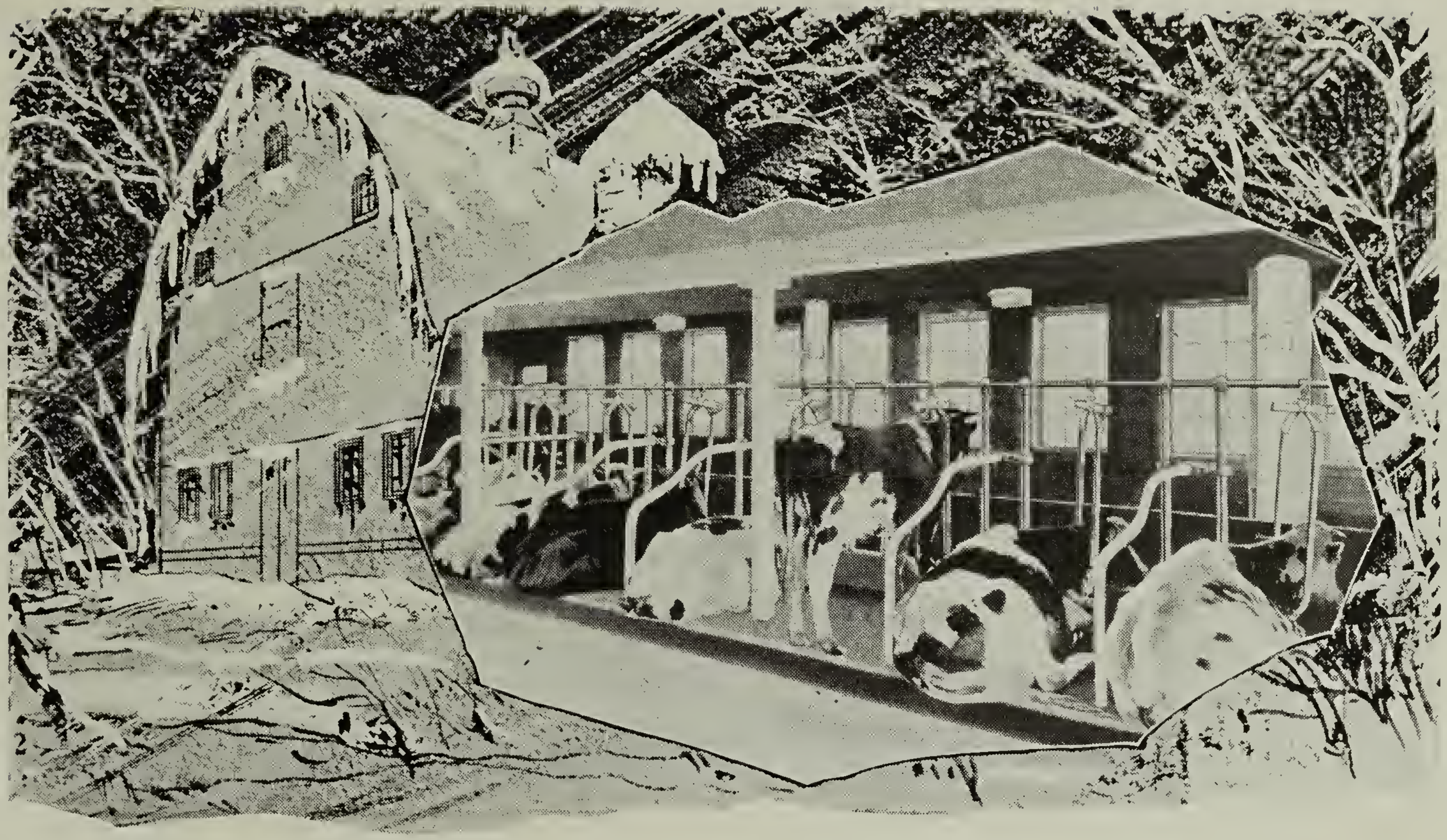


After

No longer is this—just another barn. It is now a dairy health barn. Wherever you go you will find men who are community leaders. They are substantial business men. Their farmsteads suggest progressiveness. These men are eager to improve their product while also improving their own financial welfare.



CLAY Insulated Flues Are Tight Fitting and Insure Permanent and Efficient Operation



Settled for the Night—No Need for Worry—Your Herd Is Safe

WINTER'S worst blizzard rages out-doors. Stoutly built walls stand as barriers against the cold whipping winds. The stable doors are firmly latched for the night.

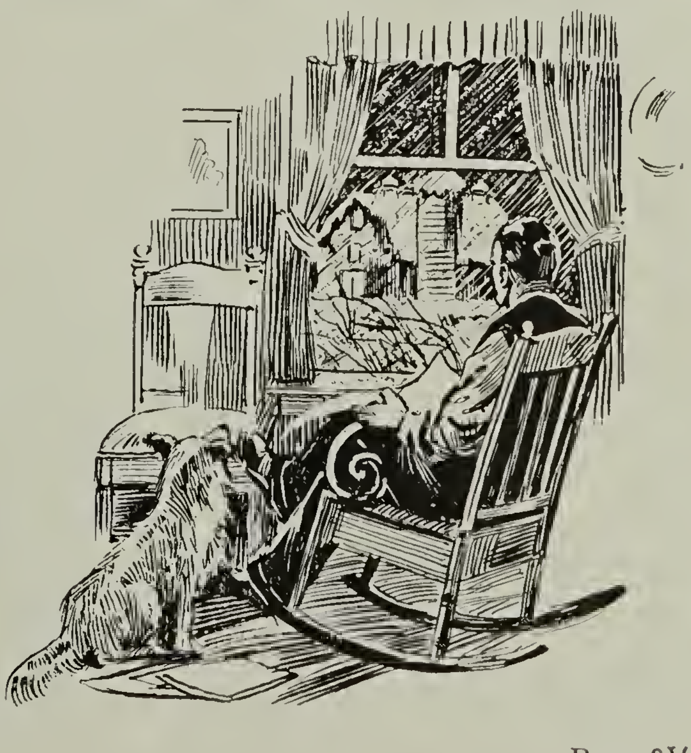
You may retire fully assured that your herd is comfortable and safe—that clean, fresh, tempered air reaches throughout the stable.

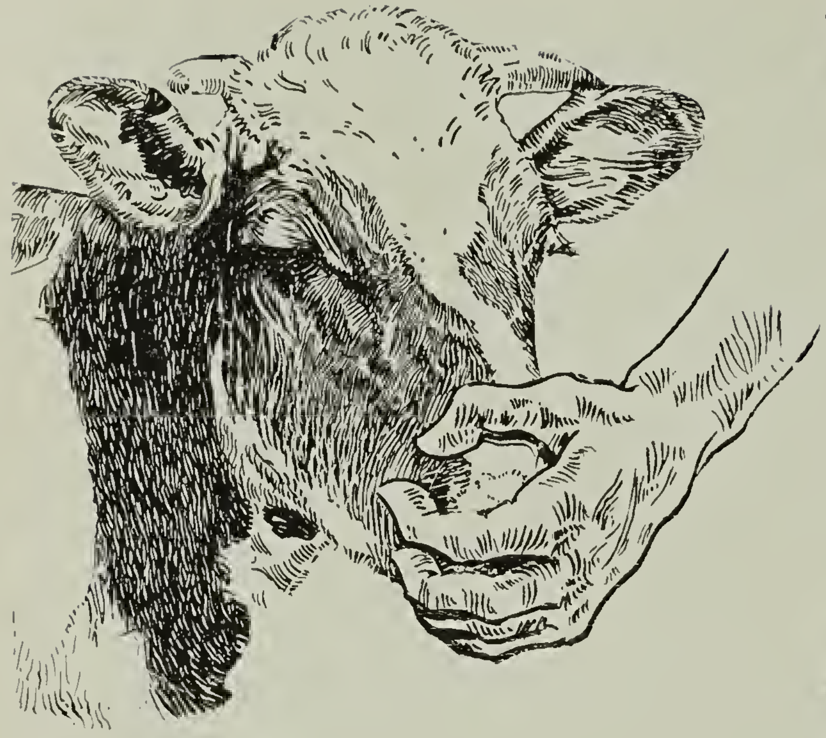
CLAY automatic *self-regulating* intakes constantly guard against cold blasts blowing into the stable. They measure and regulate the incoming air to a remarkably fine degree of accuracy. Just the right amount at all times under all circumstances.

No need for hurried trips to the stable when sudden wind storms blow up at night. CLAY intakes require no personal attention—they control the inflow of air by *automatically enlarging or reducing the size of opening* as the wind velocity out-doors changes. Just as though a human hand were there to regulate the sensitive damper control. Always the proper and safe amount of air enters the stable through CLAY intakes.

This is indeed an outstanding exclusive CLAY feature in barn ventilation.

You too, Mr. Dairyman, can retire each night confident your herd is comfortable, that they are breathing clean, safe air and at no time subject to dangerous temperature changes in the stable if you install a CLAY self-regulating ventilating system.





Why Smother Your Cows When Air Is Free!

AIR is more vital than feed. It is God given—free. Yet millions of dairy cows are being smothered and slowly but surely are headed for the block. All for the want of pure, fresh air in the stable. No true dairyman would feed his cows mildewed, musty hay, nor would he allow them to drink from a polluted stream. Why then isn't it equally important that cows do not breathe over and over again foul, germ filled polluted air? Particularly when air is two-thirds of a cow's ration.

Are you providing a sufficient volume of clean, fresh, invigorating air for your herd? Or is your stable musty, damp, impure and ripe for the rapid incubation of disease germs.

Don't let the insidious enemy "TB" fasten itself upon your cows. It may wipe out your entire herd—it may even claim you as its victim. Prevent such a catastrophe by bringing health-giving air into your stable.

Have you any idea how much fresh air a cow really needs? How much air must be brought into the stable to maintain a high degree of air purity for each cow, say nothing about the entire herd?

A cow breathes 116 cubic feet of air per hour. In other words if you could carry air in five gallon pails you would be required to carry 4000 pails every twenty-four hours to each cow. That much air each cow requires to maintain life. However a much greater volume of air must be brought into the stable to provide the proper degree of air purity.

Think it over—are your cows getting enough of this free health building air?

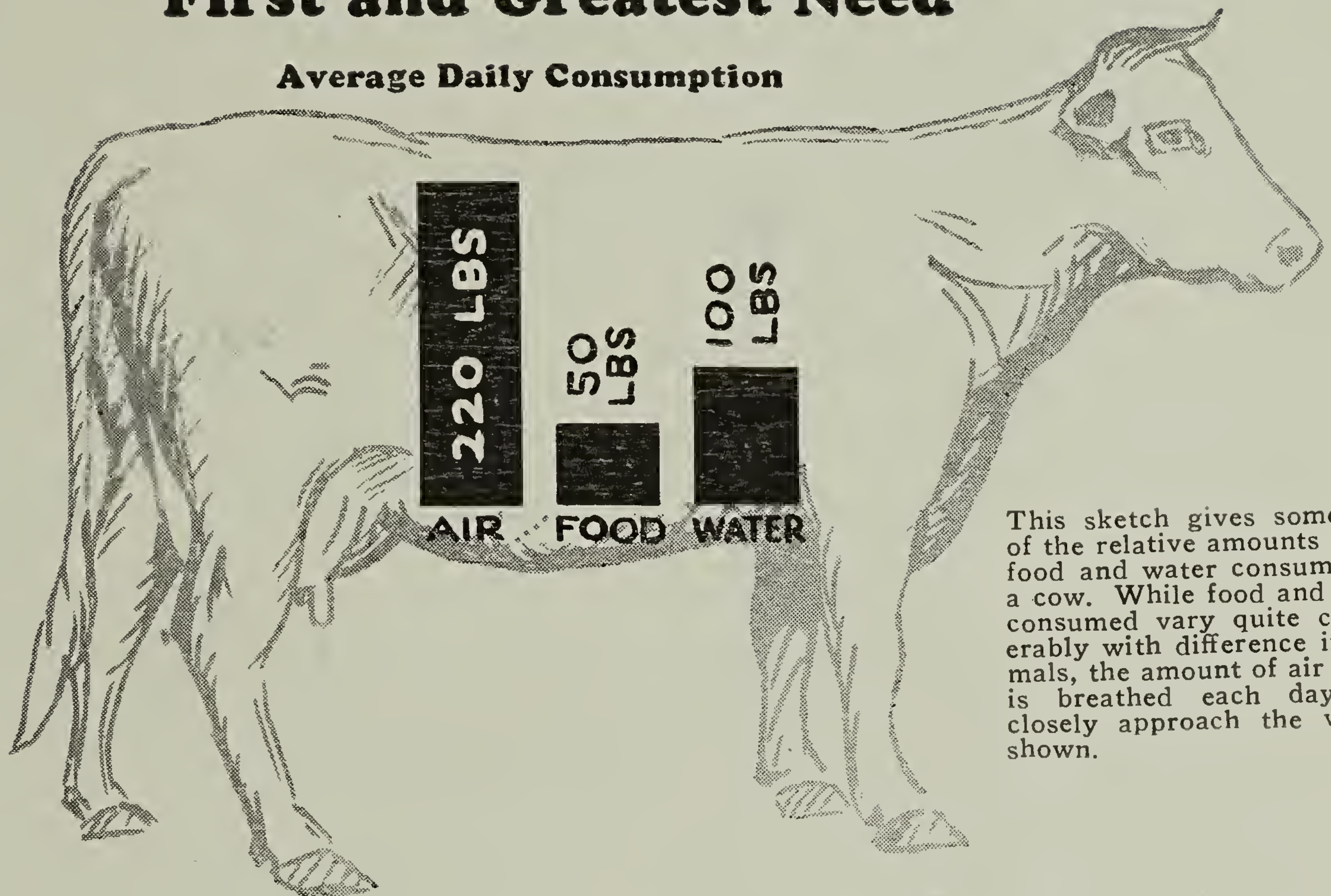
"No honest dairyman should deliberately subject those dependent on his product, to the contraction of tuberculosis. If he does, the responsibility is his just the same, whether he does so deliberately or unintentionally."

"Ignorance on the part of any dairyman who today produces and sells contaminated milk is a thin excuse in the eyes of the law."

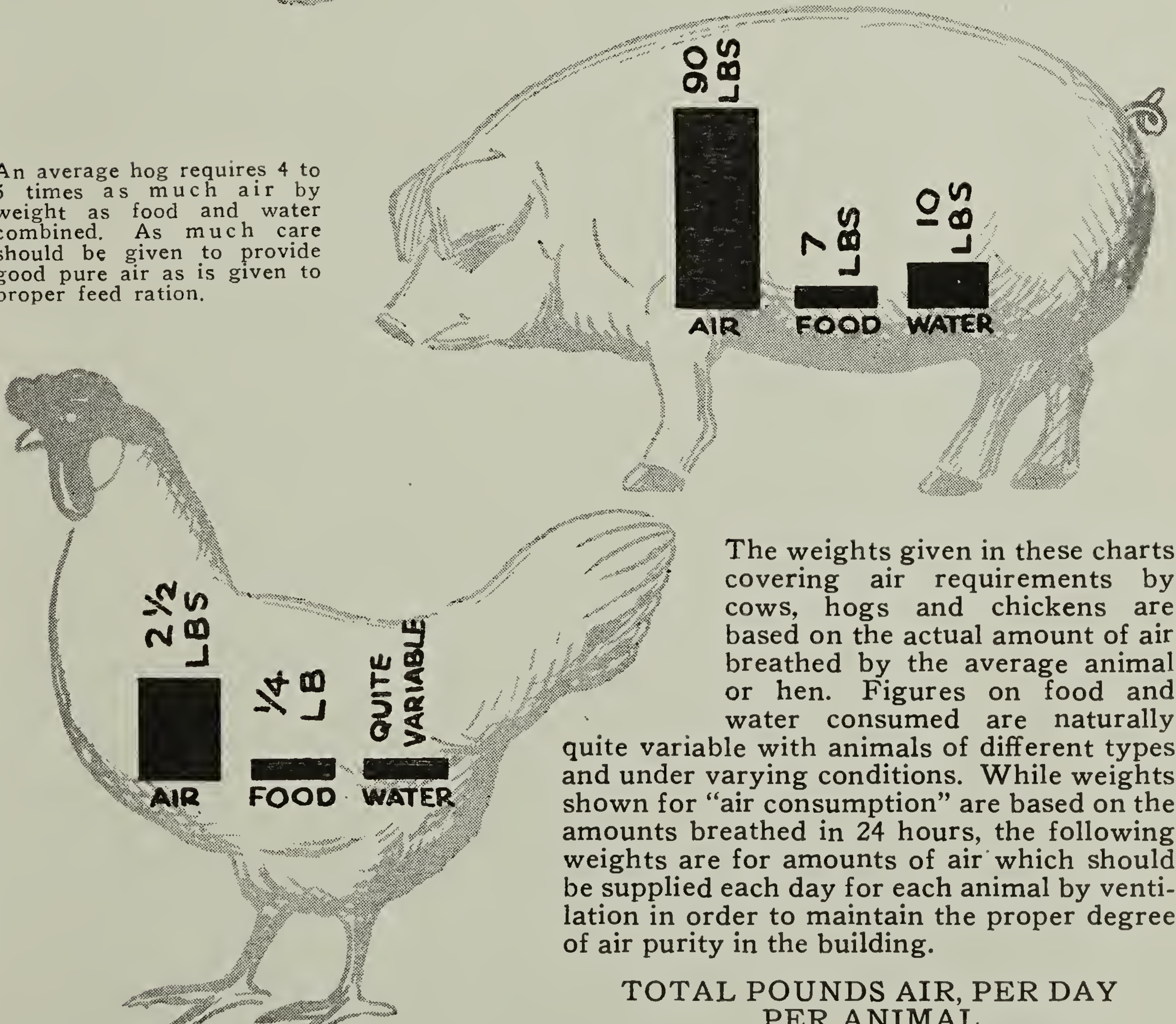
AIR

First and Greatest Need

Average Daily Consumption



This sketch gives some idea of the relative amounts of air, food and water consumed by a cow. While food and water consumed vary quite considerably with difference in animals, the amount of air which is breathed each day will closely approach the weight shown.



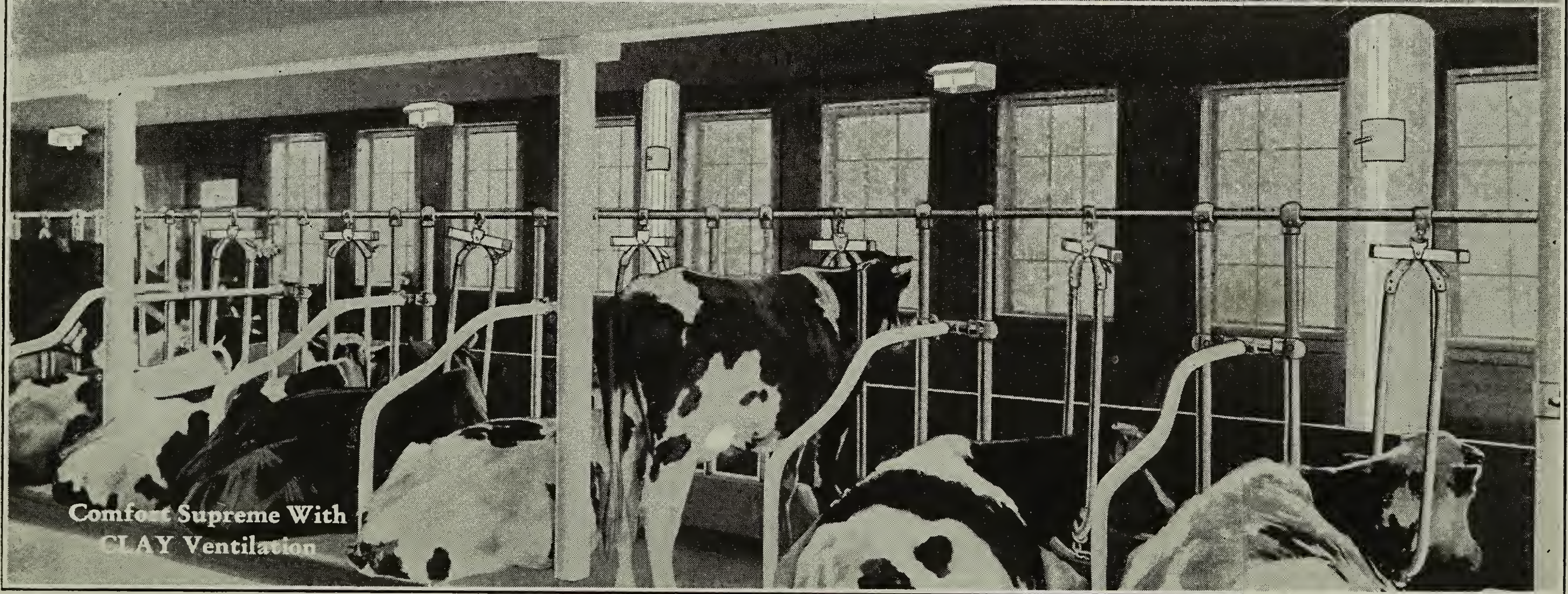
An average hog requires 4 to 5 times as much air by weight as food and water combined. As much care should be given to provide good pure air as is given to proper feed ration.

The weights given in these charts covering air requirements by cows, hogs and chickens are based on the actual amount of air breathed by the average animal or hen. Figures on food and water consumed are naturally quite variable with animals of different types and under varying conditions. While weights shown for "air consumption" are based on the amounts breathed in 24 hours, the following weights are for amounts of air which should be supplied each day for each animal by ventilation in order to maintain the proper degree of air purity in the building.

TOTAL POUNDS AIR, PER DAY
PER ANIMAL

Cows 6796 lbs., Hogs 2668 lbs., Hens 67 lbs.

The Sprague Farm—All Buildings Completely CLAY Ventilated



Comfort Supreme With CLAY Ventilation

Facts About Farm Building Ventilation

Air Circulation Standards

The following are accepted standards of air circulation for various animals. This amount of air must be supplied each hour by ventilation in order that the animal may properly assimilate food and water, as well as for the removal of the moisture thrown off by the animals.

Horse	4296 cu. ft. per hour
Cow	3542 cu. ft. per hour
Swine	1342 cu. ft. per hour
Sheep	917 cu. ft. per hour
Poultry	35 cu. ft. per hour

Composition of Air

Composition of pure and respired air as given by Prof. Carpenter (by volume).

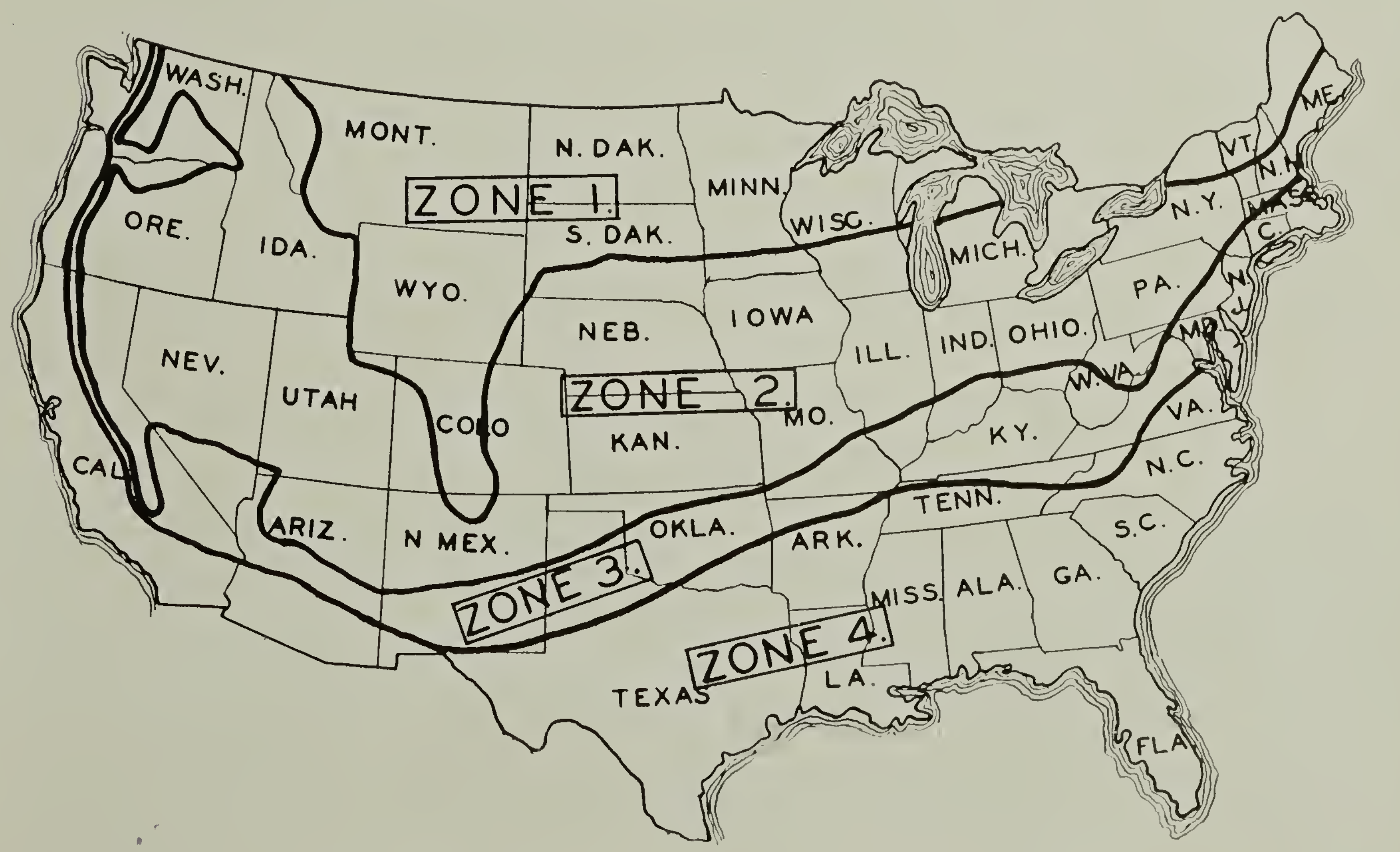
	Oxygen	Nitrogen	Carbon Dioxide	Water Vapor
Pure air	20.26%	78.00%	0.04%	1.50 (Variable)
Respired air	16.20%	75.00%	4.00%	5.00

Respired air is at from 90-degrees to 98-degrees F. and is nearly saturated with water vapor.

Space Heated By Various Animals

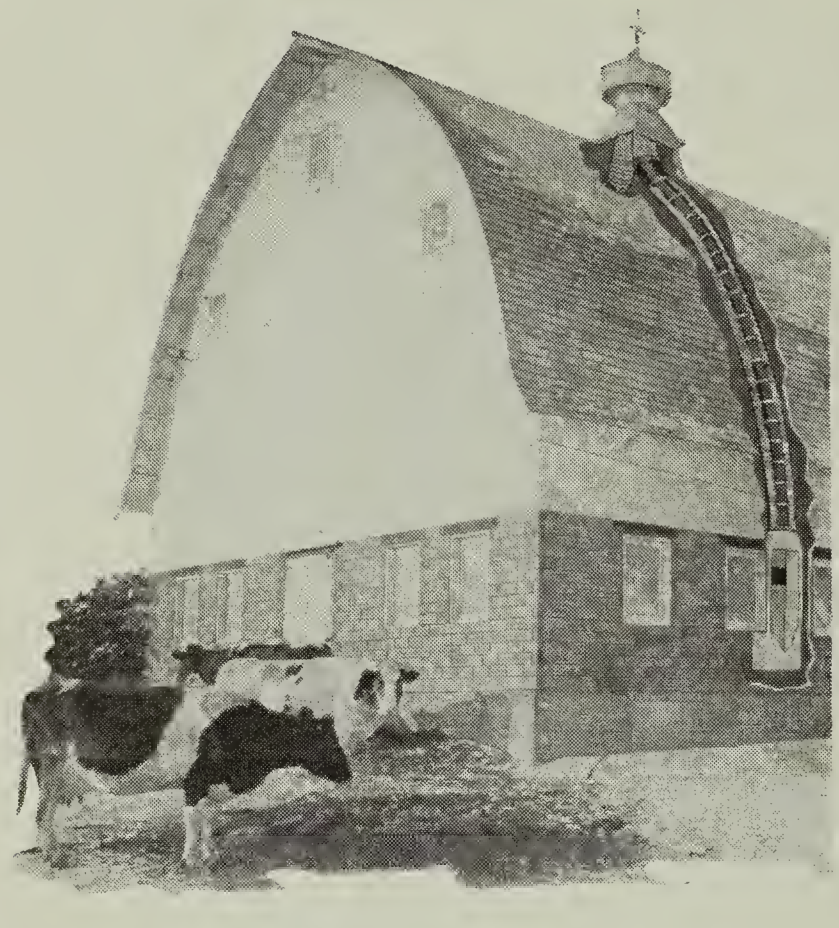
Amount of space full grown animals will heat to a comfortable degree of temperature. (By zones as shown on zone map below.)

	Zone 1.	Zone 2.	Zone 3.
Horses	720 cu. ft.	790 cu. ft.	860 cu. ft.
Cows	600 cu. ft.	660 cu. ft.	720 cu. ft.
Hogs	200 cu. ft.	220 cu. ft.	240 cu. ft.



BARN VENTILATION

Investment in Ventilation Pays Good Returns



INVESTMENT in a CLAY Ventilating System for your barn means positive assurance of air circulation in proper volume. The standard of air purity maintained will aid in the proper assimilation of food and water by your cows. This means a greater amount of the feed and water will be turned into milk and meat.

The results of an experiment made recently show to some extent the dollars and cents value of good ventilation.

Ten cows were put on test over a very lengthy period of time. During one-half of the test the cows were kept in a well ventilated room, during the other half of the test, they were kept in a poorly ventilated room. Both rooms were the same size.

An increased milk yield of 4%, an increased body weight of 1½% and a stable temperature difference of only 6 degrees, resulted when the cows were kept in the well ventilated room.

To give some idea of the return on the investment in a CLAY Ventilating System in the average barn, let us consider the following, based on the results from the tests described above.

Taking as an example a barn housing 26 milk cows, we will assume an annual milk yield of 10,000 lbs. per cow in the poorly ventilated barn. This herd would then produce 260,000 lbs. of milk in a year. We may safely say that the herd is housed in the barn at least one-half of the year. Thus, one-half of their total production, or, 130,000 lbs. of milk is produced under conditions affected by proper ventilation.

130,000	Lbs. Produced with poor ventilation.
4%	Increase due to good ventilation.
5,200	Lbs. Increase due to good ventilation.
.02	Estimated value per pound.
$104.00	Increased profit.

The increased profit on milk yield alone will show a return of more than 20% a year on the investment in a CLAY Ventilating System for this barn. This without any consideration being given to the factor of increased body weight, disease prevention, saving on building and equipment, etc.

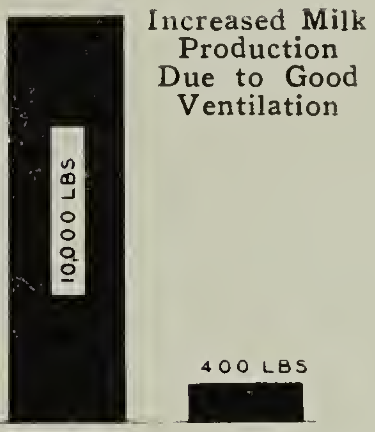
10 Pounds of Water Added to Air by Each Cow

Each mature cow throws off about ten pounds of water each twenty-four hours, thru nostrils and pores of the skin. More than a gallon of water from each cow each day. This means the average sized herd will add about a barrel of water a day to the air. This water is thrown off in the form of vapor. It must be carried out by the ventilating system or, after first saturating the air of the barn, it will appear in the form of precipitation on walls and ceiling. In addition, a certain amount of the moisture of urine is added to the air and must be considered part of the problem of ventilation.

CLAY EQUIPMENT CORP., Cedar Falls, Iowa

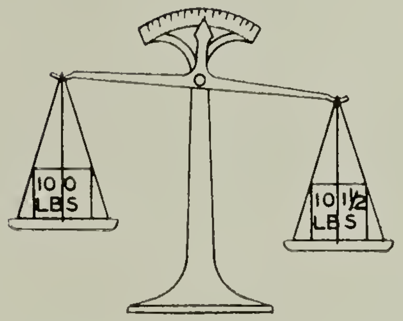
Air Is Vital to Production—Health and Development

A cow requires the oxygen in 3542 cubic feet of air each hour to properly assimilate or burn the food and water it consumes. As a furnace requires a given amount of oxygen, through air draft for proper combustion, so does a cow or horse require the proper amount of air to burn up the fuel, food and water, that it consumes. All things being equal, such as quantity and quality of food and water, the animal provided with the proper volume of pure air will more thoroughly digest the food and water consumed. The results will be maximum production of milk, heat and body development. Insufficient air supply means a waste of a certain percentage of the food used by the animals.



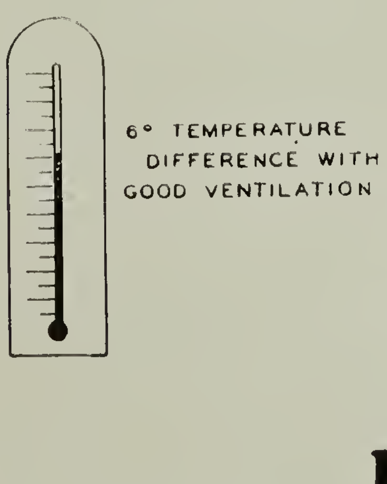
Increased Milk Production

Recent tests of conservative nature by a large State University showed an increased milk production of approximately 4% from the same cows in a properly ventilated barn as compared with results in a poorly ventilated stable. This increase alone soon pays for a good ventilating system. Regardless of the quality of animals, feeding or care, the provision of the proper amount of oxygen by good ventilation will enable you to get better results from your cows. Oxygen in the air is as necessary to the digestion of food as it is to the combustion of fuel in a stove or furnace.



Increased Body Weight

By the same tests, in the stable poorly ventilated and the one well ventilated, the group of cows showed an increased body weight of approximately 1½% after a period of time in the well ventilated stable as compared with their weights after the same length of time in the poorly ventilated one. As dairy cows were used in the test, this does not amount to as great an item as it would have if the animals had been of a beef strain.


6° TEMPERATURE DIFFERENCE WITH GOOD VENTILATION

Slightly Lower Temperature

During the same tests mentioned above, a check was made on the difference in stable temperatures, resulting from good ventilation as compared with the stable poorly ventilated. Average difference did not exceed 6-degrees lower. This proved that proper air circulation can be obtained without making the stable too cold. A stable in which the air is pure and fresh feels more comfortable.

Disease Prevention

Possibility of disease spread is greatly reduced if the barn is well ventilated. Tuberculosis and contagious abortion are serious menaces to profitable dairy farm operation. That the spread of these contagious diseases is reduced to a minimum, in many cases entirely prevented, is evident from numerous cases reported and investigated. Two great reasons for this are that good ventilation improves the vitality of the animal itself while also creating a more dry and sanitary home for the animals. Bacteria thrive in warm moisture laden air and on wet surfaces.

Sunlight is an important factor in barn sanitation and should be taken into consideration. From three to four square feet of window surface should be allowed for each grown animal.

The Importance of Good Wall Construction

Merely building a wall to form a 'shelter' is poor economics when building a barn. The wall around the stock room should be more than just a protection against wind, rain and snow. It should be built to hold in all the heat possible, to insure a comfortable temperature and dry stable. If the wall is thin and of a material that readily conducts heat, the animals will not be able to maintain a comfortable temperature in the stock room, with a great deal more of the feed consumed going toward production of body heat than if the walls are properly built.

Heat can be measured the same as weight or distance. The unit of heat measurement most commonly used is the B. T. U. (British Thermal Unit). One B. T. U. is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit.

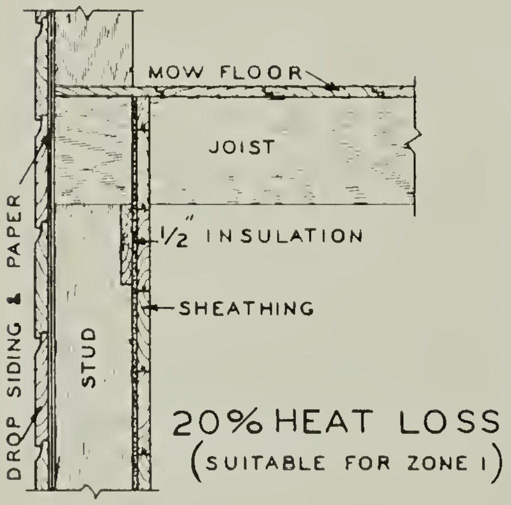
Standards of wall construction are rated according to the number of B. T. U. which will pass through one square foot of wall surface per degree of temperature difference in each hour. Not through cracks but through the material of the wall itself.

In quoting heat loss percentages for various types of walls a 2″ solid concrete wall is rated at 100% heat loss. This means that one B. T. U. of heat will pass through one square foot of 2″ concrete wall for each degree of temperature difference inside and outside the building each hour. Thus with a 50-degree temperature difference the amount of loss would be fifty times as great.

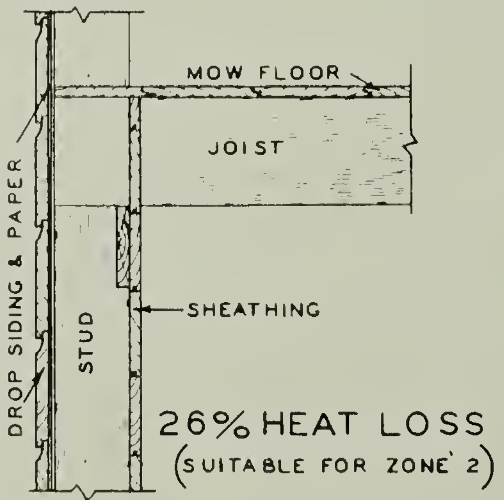
For comfortable stable temperatures and reduced possibilities of wet walls the percentages of heat losses which should not be exceeded for the various building zones are given here. (See zone map — page 13V.)

Zone 1	Zone 2	Zone 3
20%	26%	30%

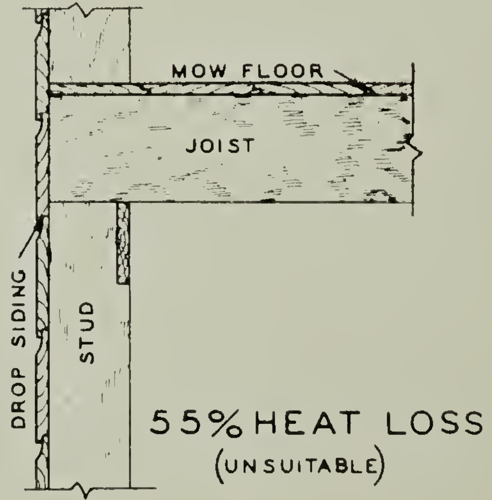
We have information available concerning the heat loss percentages of all types of wall construction. We will gladly furnish this on request. A few examples are shown below.



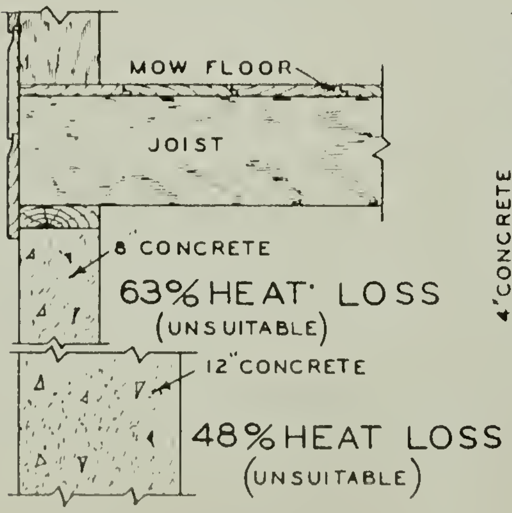
20% HEAT LOSS (SUITABLE FOR ZONE 1)



26% HEAT LOSS (SUITABLE FOR ZONE 2)

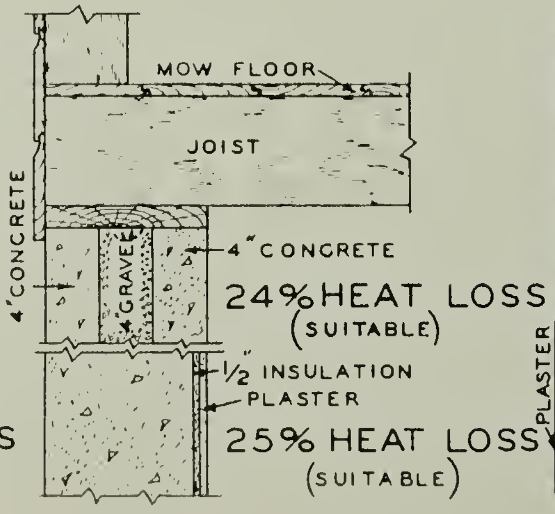


55% HEAT LOSS (UNSUITABLE)



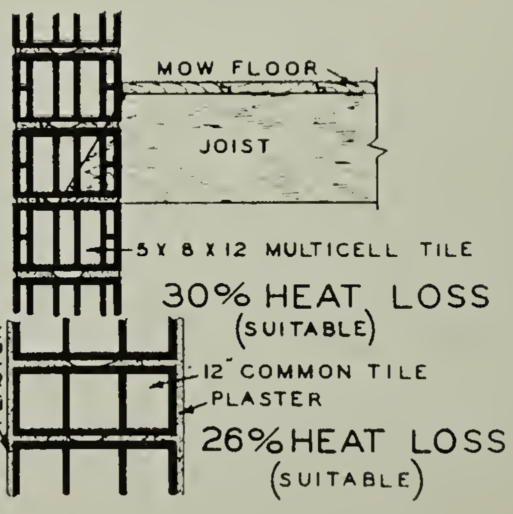
63% HEAT LOSS (UNSUITABLE)

48% HEAT LOSS (UNSUITABLE)



24% HEAT LOSS (SUITABLE)

25% HEAT LOSS (SUITABLE)



30% HEAT LOSS (SUITABLE)

26% HEAT LOSS (SUITABLE)

What Makes A Wall Wet or Frosty?

AIR has the capacity to hold water. Invisible vapor it is true, but real water just the same, not small particles which would show as mist but rather water vapor, an invisible gas. The amount it will carry varies surprisingly with the temperature. For example, 10,000 cubic feet of air (which is approximately the contents of the twenty cow barn) will at 20 below zero hold when completely saturated .3 lbs water vapor.

Amount of Water 10,000 Cubic Feet of Saturated Air Will Hold at Various Temperatures

—20° F.	.3 lbs.	40° F.	4. lbs.
0° F.	.8 lbs.	60° F.	8. lbs.
20° F.	2.2 lbs.	70° F.	11.5 lbs.

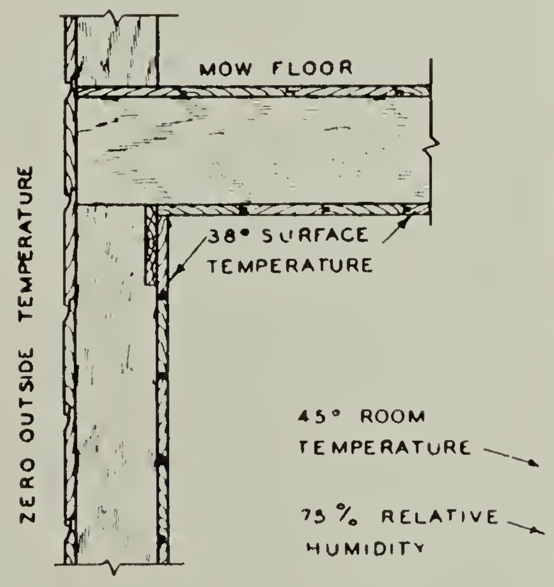
If air at 70° F. already fully saturated with water vapor is lowered to 40° F. it will release as actual water precipitation that amount of water beyond its capacity to hold. This amount for 10,000 Cubic Feet of air would be 7½ lbs.

We have many striking natural demonstrations of this effect, rain and snow being the most common. Let us turn now to the wall surface itself.

If you heat the end of an iron rod, shortly the other end becomes hot. This heat moving along the rod is conduction, and the greater the difference in temperature between the hot end and the cold end the greater the conduction.

In exactly the same manner heat moves right through the walls of your barn and a surprising amount of the total warmth given off by the bodies of the cows is lost in that way. If the heat moves through this wall very fast it is obvious that the inside surface of the walls becomes colder than the air inside the barn. To hold this inside surface as warm as possible is the purpose of well insulated walls. However, even with well insulated walls it becomes necessary to hold the humidity 15% to 20% below the saturation point.

How the Water Forms



Water or frost formation on inside wall or ceiling surfaces is due to one or more of three factors. They are: POOR VENTILATION, IMPROPER WALL CONSTRUCTION, INSUFFICIENT ANIMAL HEAT.

For example, the maintenance of a barn temperature of 45-degrees and a relative humidity of 75% is considered both desirable and possible. With the proper number of animals housed to heat the space and proper ventilation to remove the excess moisture, this condition can be obtained. However, this is not enough to insure a completely dry wall or ceiling. If the wall construction is of a type allowing too rapid a rate of heat loss there may be a great deal of temperature difference between the air of the room proper and that of the air lying directly along wall surfaces. See the sketch on the left. If the air along wall surfaces is 7-degrees (or more) below the temperature of the air in the room, the air at the wall surface will become completely saturated and precipitation of moisture results. The greater this temperature difference is, the more water will appear on the wall. If the temperature of the room air should be 40-degrees and that of the air along wall surfaces 30-degrees, the moisture precipitated will appear in the form of frost. This moisture which appears on wall surfaces, due to too great a temperature difference, (in the well ventilated building) is termed "natural" moisture. In a poorly ventilated barn the excess moisture thrown off by the animals would be added to the natural precipitation, causing a great deal of moisture to be present on wall surfaces over long periods of time.

As an illustration of "natural" moisture precipitation, due to temperature differences, fill a glass with cold water. Allow the glass to stand awhile. Soon water will appear on the outside surface. The colder the water inside the glass, and the thinner the wall of glass, the more "natural" moisture from the surrounding air will be precipitated.

No. 100 Series Clay Ventilator

The Superior Barn Ventilator

WHERE a complete barn ventilating system is installed always use the No. 100 series CLAY ventilator. This ventilator is designed to produce the greatest suction possible in any stationary head ventilator. The lines, construction and general appearance of the No. 100 CLAY ventilator, puts it in a class by itself as a quality barn ventilator. The entire top part of this ventilator is constructed of 24 gauge copper bearing galvanized steel, with unusual features of reinforcing. The base sheets are 26 gauge reinforced by special 'siding' design.

Copper Spire Standard Equipment

With copper lightning rod point as standard equipment at no extra price, together with other features revealed by a study of the following specifications, the No. 100 series CLAY ventilator represents a value not found in any other barn ventilator.

Specifications

HEIGHT—See below.

Weight—See below.

MATERIAL—Top 24 gauge copper-bearing galvanized steel. Base sheet 26 gauge copper-bearing galvanized steel.

VANE ROD—Copper lightning rod spire.

WEATHER VANE—Cast arrow with full bodied figure of cow or horse. Cow vane furnished unless otherwise specified.

BALLS—Two beautiful white glass balls with attractive ornamental fluting.

CARDINAL POINTS—Points of compass, N-E-S-W, heavy cast aluminum.

WEATHER BAND—Stiffened with four one-inch beads, two top and two bottom, also by ornamental oval shaped embossing.

WEATHER BAND BRACKETS—Six 3/16x1¼″ bar steel.

NECK—Reinforced with heavy beads.

BASE MOULDING—Corner held tight with locking strip, cannot come apart, 2x8″ wood frame built into moulding holds it rigid.

BASE SHEETS—Special siding design, adds to appearance and stiffens base.

BASE CORNERS—Interlocking, water proof corner joint, four thickness of steel for strength.

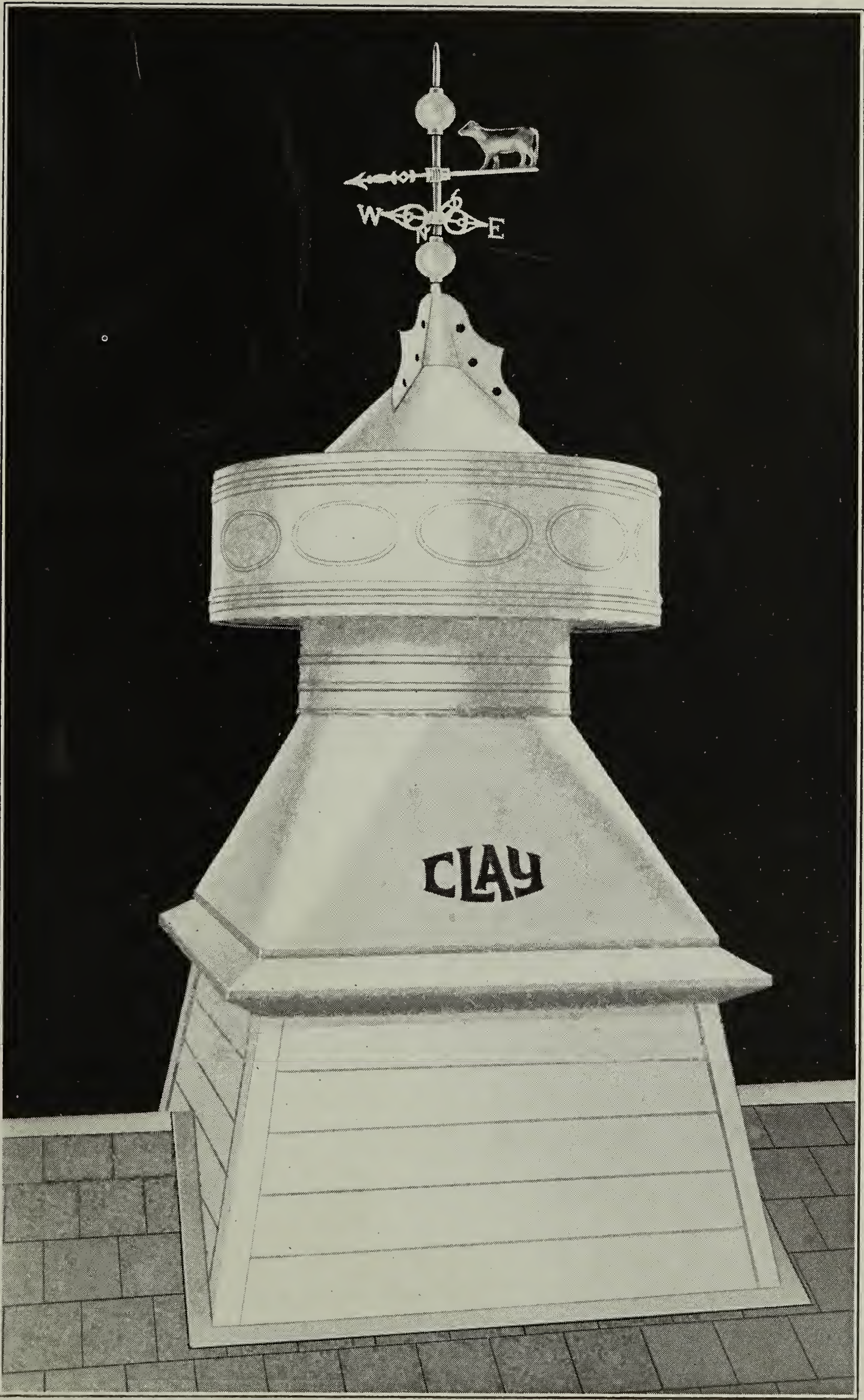
FINISH—Satin Aluminum, put on with air brush.

No. 100 Series Clay Ventilator

	No. 124	**No. 127**	**No. 130**
Flue diameter	24″	27″	30″
Moulding	48″ x 48″	51″ x 51″	54″ x 54″
Heights	10′	10′ 9″	11′ 4″
Weight (shipping)	255 lbs.	275 lbs.	326 lbs.

Takes Lower Freight Rate

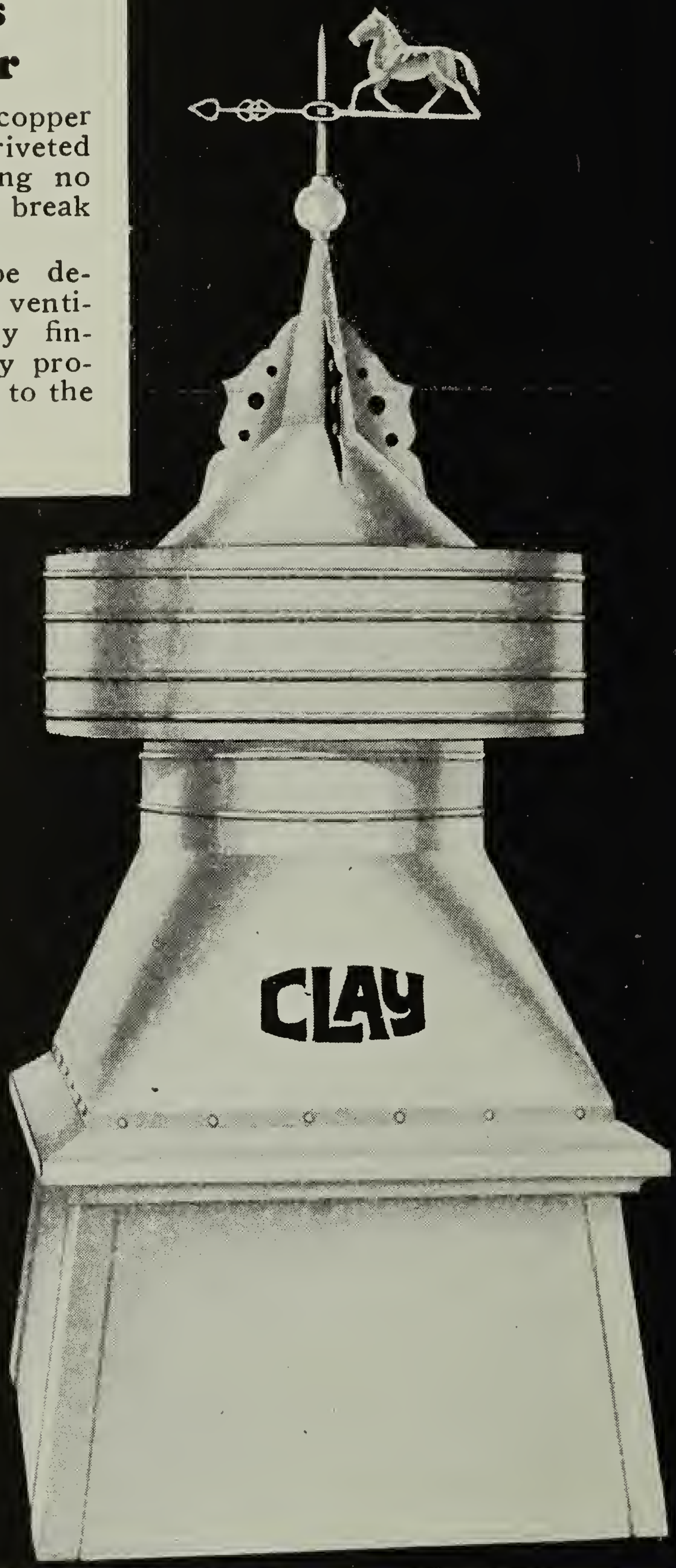
Due to our method of detaching the roof and nesting inside ventilator, the No. 100 series CLAY Ventilator takes first class rate west of the Mississippi river. This means considerable saving in freight as compared with other barn ventilators taking 1½ times first class rate.


W
N
E
CLAY

No. 400 Series Clay Ventilator

Constructed of 26 gauge copper bearing steel. All seams are riveted or double locked, there being no lapped or soldered seams to break open.

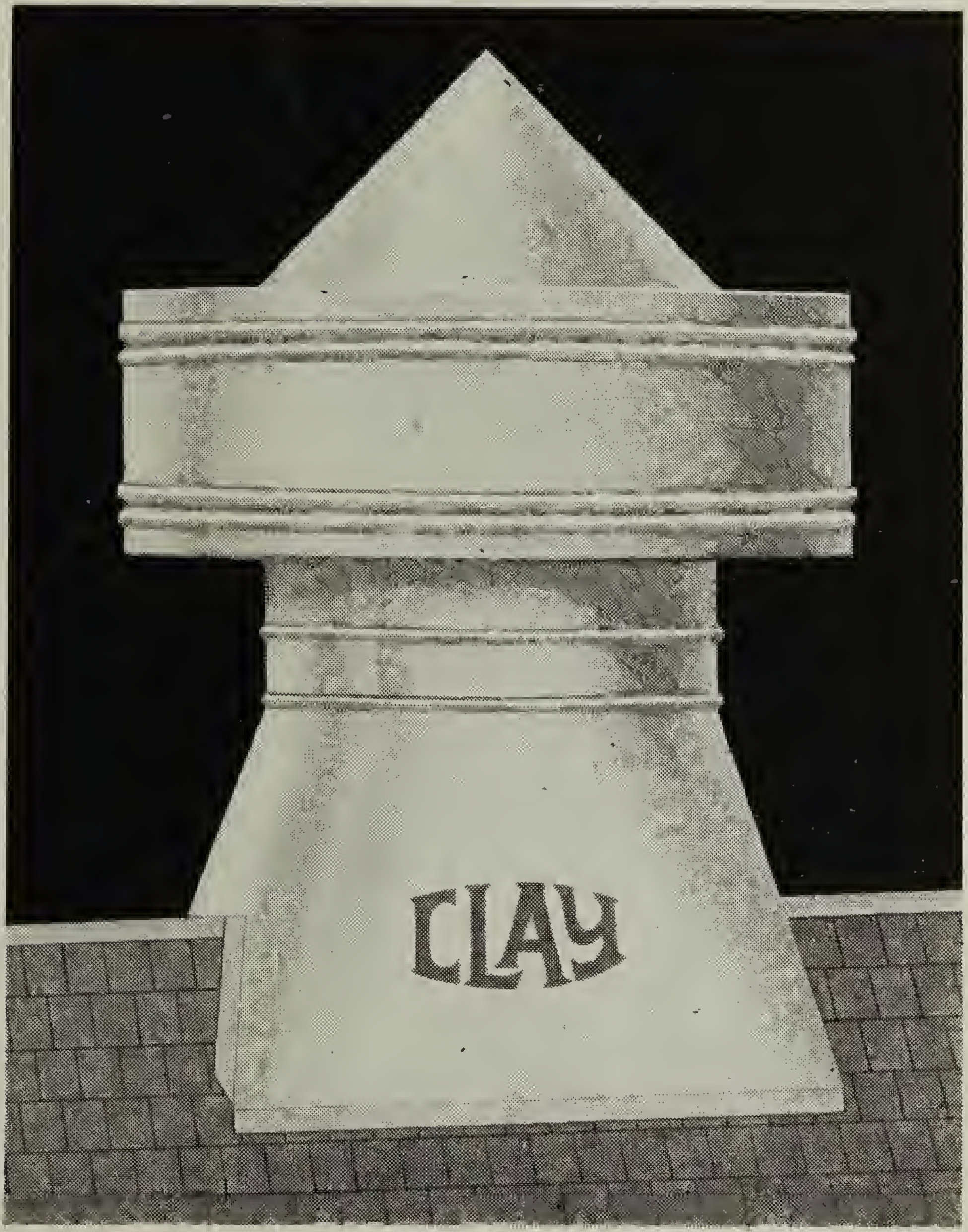
CLAY Ventilators can be depended upon to provide full ventilating capacity. Handsomely finished in aluminum, gracefully proportioned, lending distinction to the barn on which they are used.



400 SERIES ABOVE

	No. 420	No. 424	No. 427	No. 430
Flue	20″	24″	27″	30″
Moulding	34″ x 34″	40″ x 40″	44″ x 44″	48″ x 48″
Height	7′ 9″	8′ 7″	9′ 3″	12′ 0″
Weight	134 lbs.	165 lbs.	190 lbs.	220 lbs.

Clay Ventilators Make a Barn Better and Look Better



IT is a notable fact that to passersby your barn looks old fashioned or looks modern according to whether it has a modern and efficient barn ventilator. The ventilators on this page are designed very similar to our No. 100 series shown on page 19, without the flaring base. Made of 26 gauge copper bearing steel in the 20, 24 and 27″ diameter and 24 gauge in the 30 inch size. The 20 and 24″ ventilators have 5 braces holding weather band to the head, the 27 and 30″ sizes having 6 brackets. Finished in satin aluminum finish. If a complete ventilation system is contemplated later you should use the 100 series only.

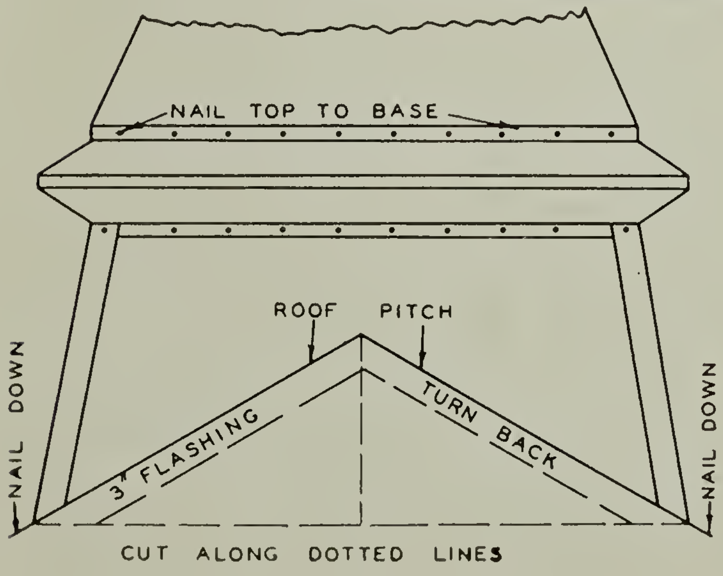
Clay Taper Base Ventilator—No. 600 Series

No.	**620**	**624**	**627**	**630**
Flue	20″	24″	27″	30″
Base	2′ 4″	2′ 10″	3′ 3″	3′ 9″
Height	3′ 8″	4′ 3″	5′ 2″	6′ 1″
Weight	84 lbs.	108 lbs.	135 lbs.	82 lbs.

Copper spire and animal vane extra.
Prices on application.

This type of ventilator is ideal for buildings where roof ventilators only are used, or where down stack of system can be fitted directly to body of ventilator. (Not possible in barns with hay carrier track along ridge.)

Erecting Barn Ventilators



To erect No. 100 or No. 400 CLAY Ventilators, or any rectangular base ventilator, mark out pitch of roof on two plain sides of base. When cutting out, allow 3″ overlap to fold back and nail to roof over shingles. Nail uncut sides to roof as shown. Place top part of ventilator on base and nail to frame on all sides. On 400 series taper base bolts to rectangular base.

No. 600 series. Cut out two sides of taper base to fit pitch of roof, allow overlap, and nail same as above all around.

Controls the inflow by automatically enlarging and reducing the size of the opening as the wind velocity changes

CLAY Intakes control the air under all conditions. With low wind pressure outdoors CLAY Intakes are wide open admitting air freely—if stormy outdoors, CLAY Intakes control the air closely, maintaining healthful air purity and dryness.

FIGURE 1 shows sensitive aluminum damper in normal position (wide open). When in this position wind pressure through intakes and the suction from ventilators on roof is least. This usually occurs on cold, still nights when there is no wind whatsoever, but when ventilation in the stable is most needed. Note the air flow entering in uniform and generous volume.

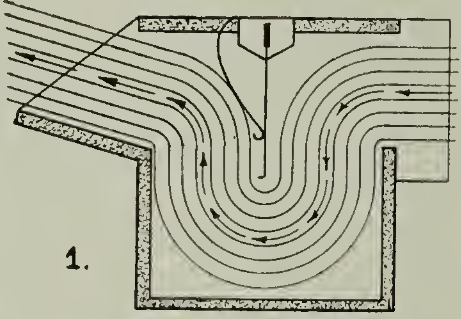
The number of intakes are planned to maintain proper stable temperature and desired air purity when most unfavorable ventilating conditions exist out-doors (still cold nights). Consequently, should a strong wind come up during the night an immediate automatic control of air volume is imperative.

To maintain the same even flow of air under such increased wind pressure the CLAY Intake control damper advances as in Figure 2 towards the closed position cutting down the vigorous air movement holding it to the desired volume.

Figure 3 shows damper almost closed when suction and air pressure is greatest. Note that in spite of terrific wind pressure the air entering the stable is still the same smooth volume.

We have tested dampers that under extreme wind pressure controlled without personal care the volume of air within 10%. Without this device other systems often increase the air flow 200% to 300%.

Figure 4 illustrates damper preventing back draft. With slightest back draft, damper instantly closes, preventing the escape of warm air and the subsequent reversal of the ventilating system.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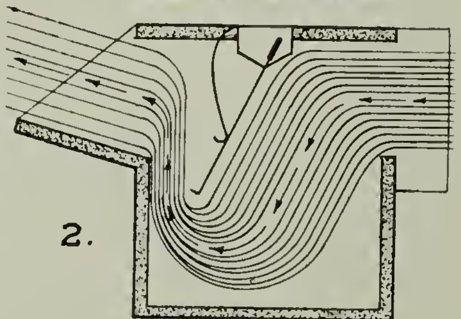
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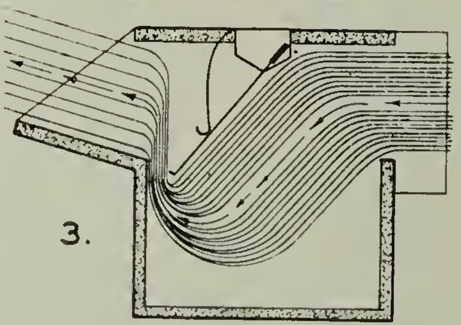
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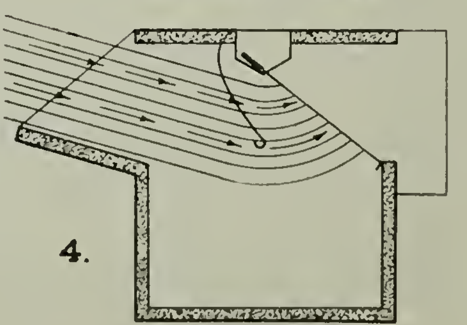
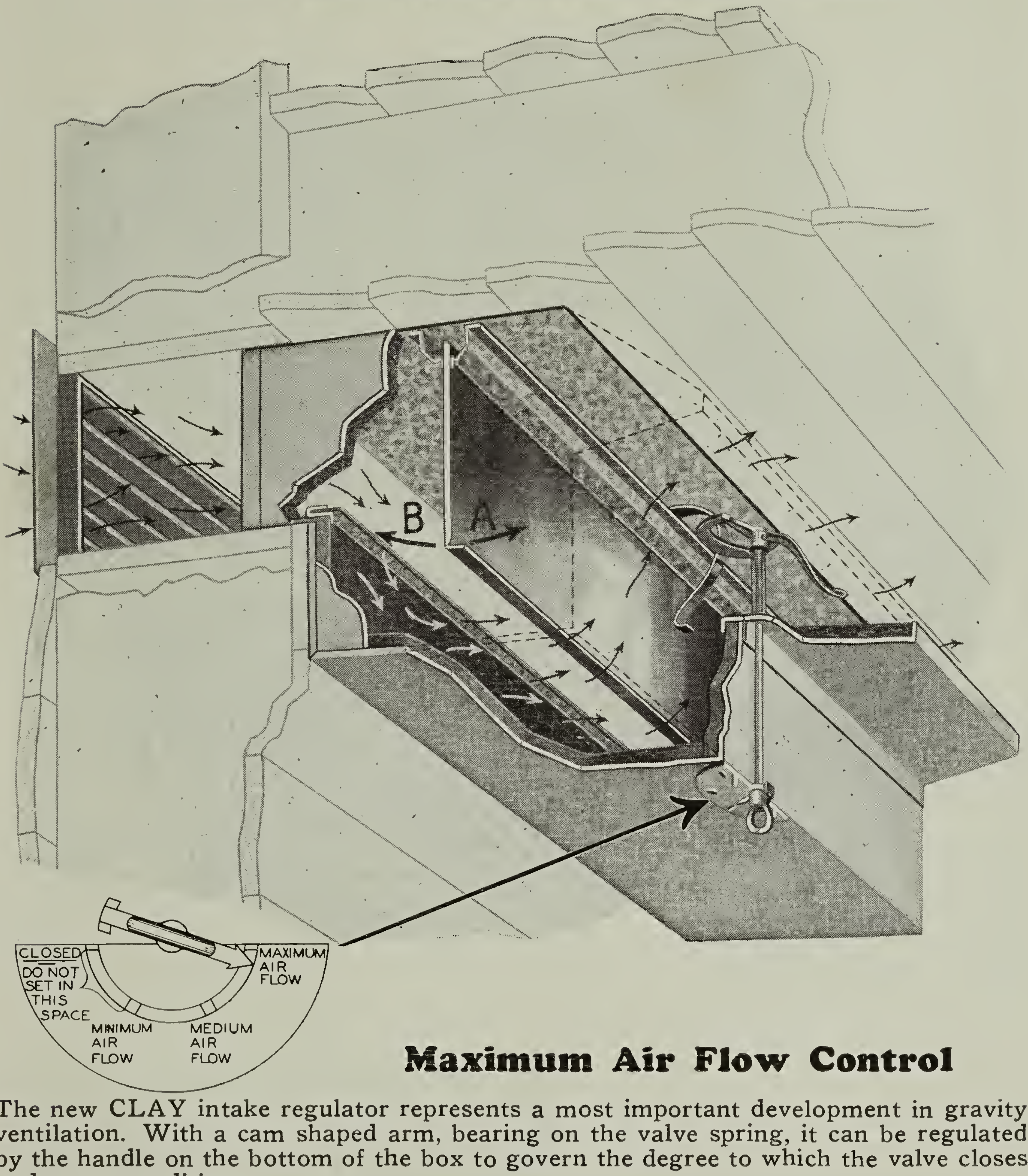

4.

Outstanding Improvement

Now Provides Automatic Seasonal Control



Maximum Air Flow Control

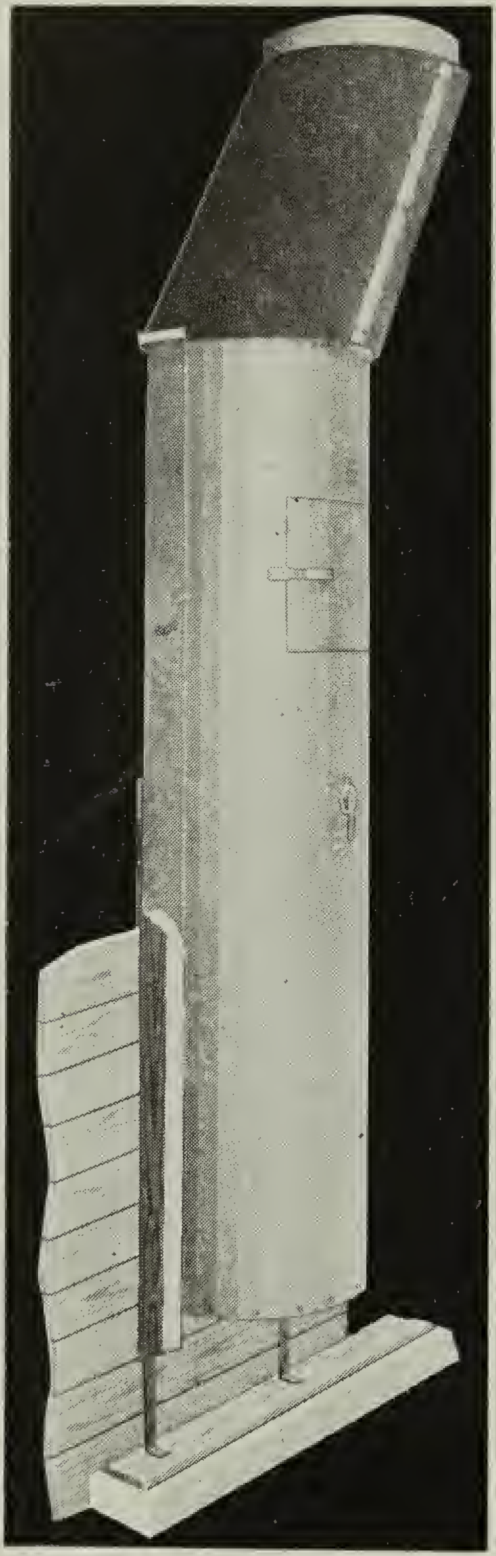
The new CLAY intake regulator represents a most important development in gravity ventilation. With a cam shaped arm, bearing on the valve spring, it can be regulated by the handle on the bottom of the box to govern the degree to which the valve closes under any conditions.

See illustrations above. With control indicator set at minimum air flow, only a limited volume of air is permitted to enter regardless of wind velocity or temperature outdoors. This is due to the automatic action of the valve as illustrated on page 22V. With control indicator at maximum air flow, the spring resistance is greater against the valve, allowing a greater volume of air to enter. At any setting of the indicator the action of the valve is automatic in controlling the maximum volume of inflowing air, with a variation not exceeding 10% regardless of wind velocity or temperature. See arrows indicating direction of valve movement in illustration above. Arrow "A" shows direction of valve with outside wind pressure against it. Arrow "B" indicates valve movement when back-drafting occurs. See page 37V for operating instruction.

Intake box 26 gauge copper bearing steel, lined inside with ½" insulation. Has angled air deflector on inside opening, steel neck extension at back opening for fastening in wall frame. Valve of very light weight aluminum, permanently balanced. Valve spring of stainless steel, slides over stainless steel strip on valve. Outside storm louvre 26 gauge copper bearing steel, makes attractive exterior finish. Intake regulator and storm louvre finished in satin aluminum.

IT422B Intake Regulator, shipping weight 29 lbs.
SL622 Storm Louvre, shipping weight 5 lbs.

Clay Stable Stacks



The stable stack is the part of the barn ventilating flue which extends from the stable floor into the loft and includes the insulated boot which extends 2 feet above the loft floor.

Section below loft floor is flat backed to fit between studding 24″ on center or flat against masonry wall. Stack is constructed of 26 gauge copper bearing galvanized steel, half round in shape, 22″ wide x 16″ deep, to add to strength. Bottom edge, top and center reinforced inside with $\frac{3}{16}$″ x $1\frac{1}{4}$″ bar steel. Adjustable legs are furnished in back corners of stack to allow proper anchoring to floor in barns of various ceiling heights. Legs are constructed of $\frac{3}{16}$″ x $1\frac{1}{4}$″ bar steel, with bolt holes every 2″ for adjustment.

A damper is placed just below the cooling door and operates with a positive lock handle on a quadrant indicating position of damper. A cooling door near the ceiling line allows for removal of warm air when desired.

The boot furnished at the top of the stable stack allows for connection of first section of barn loft flue. Constructed of 26 gauge copper bearing steel, covered with one-half inch fibro felt insulation, held on with seam and tie bands. (Applied at factory before shipment). These boots are made in two shapes, straight backed and offset. Where stable stack is recessed between studs or placed in pilasters, specify offset boots. If stable stack is installed flat against inside of masonry walls, specify straight backed boot. A sheet of ½″ insulation is furnished for insulation of flat side of flue against outside wall. (See page 26V for further detail).

SS16-22 — Stable Stack — Complete with insulated boot, cooling door, damper and adjustable legs. (Specify type of boot—whether straight backed or offset.) Weight each 170 lbs.

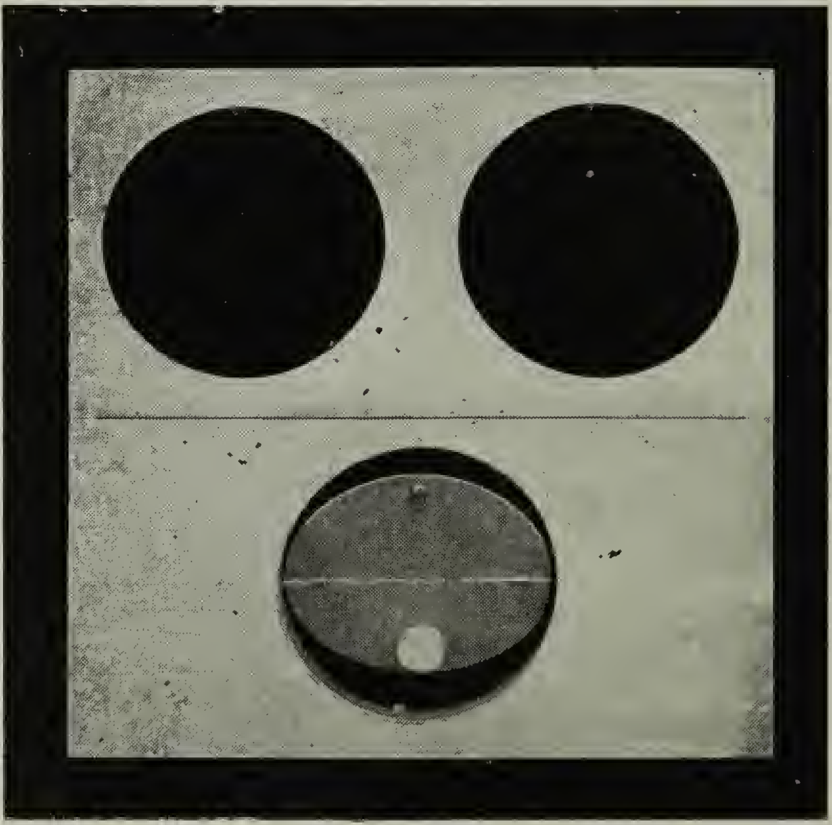
Collar Plates

The CLAY Collar plate is designed for installation in the base of the roof ventilator, being nailed to the bottom of the 2″ x 8″ wood frame in the ventilator. The purpose of the collar plate is to allow direct connection of the foul air flues to the ventilator. Constructed of 24 gauge copper bearing galvanized steel, two openings of proper size to allow two insulated barn loft flues to extend thru. Has weighted damper with loop for connecting rope to extend to loft floor. Made for installation in No. 127 and No. 130 CLAY Ventilators.

CP27—Size 43″ x 43″ (For No. 127 CLAY Ventilator). Wt. ea. 26 lbs.

CP30—Size 46″ x 46″ (For No. 130 CLAY Ventilator). Wt. ea. 30 lbs.

See page 19V for further information.



Insulated Loft Flue

CLAY Insulated loft flues are of 18″ diameter, 26 gauge copper bearing galvanized steel. The insulation covering is ½″ thick fibro felt, and is cut to proper size to form around steel flue. Loft flue sections come in 30″ lengths, shipped knocked down for saving in freight. Has lock seam for fastening together on job. Two 1 inch and one 2 inch tie bands for securing insulation around steel flue furnished for each section. Also insulation seam bands and support bands for fastening flue section to roof rafters. All steel flue and insulation sections shipped knocked down and nested. CLAY Insulated loft flue is ordered and priced per lineal foot. See pages 26V and 27V for further detail.

BLF18—Insulated loft flue (includes all necessary tie, seam and support bands). Approximate weight per foot packed, 11 lbs. (Insulation crated separately.)

Insulated Adjustable Elbows

CLAY Insulated adjustable elbows are constructed of 26 gauge, copper bearing galvanized steel, 18″ diameter same as loft flues. Shipped straight, it is only necessary to loosen bolt, adjust to proper angle for connection of straight flues and reset bolts. CLAY Insulated adjustable elbows are priced and ordered as a complete unit. (The insulation is crated separately.)

AE18—Insulated adjustable elbows. Weight each, 36 lbs.

Special Collar Plate Boots

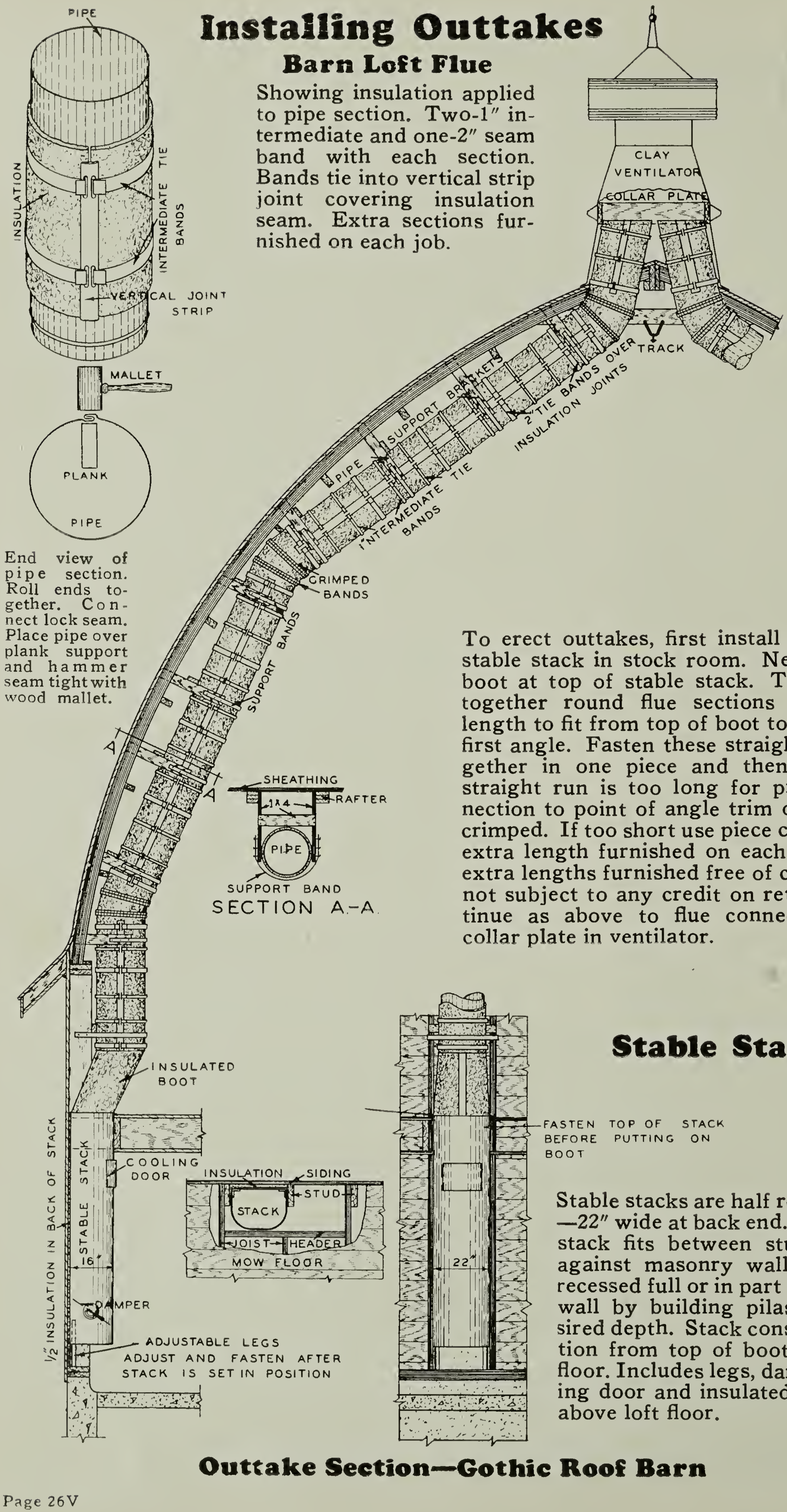
The CLAY Special collar plate boot is used to connect the top end of wood flue outtakes to the collar plate in the ventilator as described on page 39V. Constructed of 26 gauge copper bearing galvanized steel, insulation applied at factory. Boot 16″x 22″ at lower end and 18″ round diameter at upper end. Where two flues are connected to one ventilator, always figure two of these special boots.

CPB18-16—Special collar plate boot. (Complete with insulation applied at factory.) Weight each, 54 lbs.

Installing Outtakes

Barn Loft Flue

Showing insulation applied to pipe section. Two-1″ intermediate and one-2″ seam band with each section. Bands tie into vertical strip joint covering insulation seam. Extra sections furnished on each job.



End view of pipe section. Roll ends together. Connect lock seam. Place pipe over plank support and hammer seam tight with wood mallet.

To erect outtakes, first install bottom of stable stack in stock room. Next, put on boot at top of stable stack. Then fasten together round flue sections of proper length to fit from top of boot to bottom of first angle. Fasten these straight runs together in one piece and then erect. If straight run is too long for proper connection to point of angle trim off end not crimped. If too short use piece cut off from extra length furnished on each job, these extra lengths furnished free of charge, and not subject to any credit on return. Continue as above to flue connection with collar plate in ventilator.

Stable Stacks

Stable stacks are half round shape —22″ wide at back end. The stable stack fits between studs or flat against masonry walls. Can be recessed full or in part in masonry wall by building pilaster of desired depth. Stack consists of section from top of boot to legs at floor. Includes legs, damper, cooling door and insulated boot—24″ above loft floor.

Outtake Section—Gothic Roof Barn

Installing Outtakes

Collar Plate

For direct connection of flues to ventilator. Nailed on bottom of wood frame in ventilator when leaving factory. If ventilator already on barn, plate comes in two sections with standing seam. Has two openings for pipe ends and weighted damper for hay mow ventilation, operated with rope extending down to loft floor.

Insulated Elbows

Insulated, adjustable elbow. Shipped straight. Loosen bolts to set at correct angle after erecting.

Loft Flues

After the stable stack and boot have been erected, add straight run of insulated pipe to position below first angle. Fasten on adjustable elbow and set at proper degree to carry next straight run to second angle. Lay out all straight runs on mow floor, fasten together in one section, add insulation so that ends fit close together. Use 2″ tie bands over insulation joints and 1″ tie bands intermediate, three in all to each section of pipe. Tie bands fasten in slots of vertical joint strips.

A small block and tackle will simplify hoisting straight runs into position for connection with angles. Fasten flues to rafters with support bands as shown. Extra pipe sections are furnished on each job to enable cutting and matching for proper lengths of straight runs. These are furnished free of charge and not subject to credit on return.

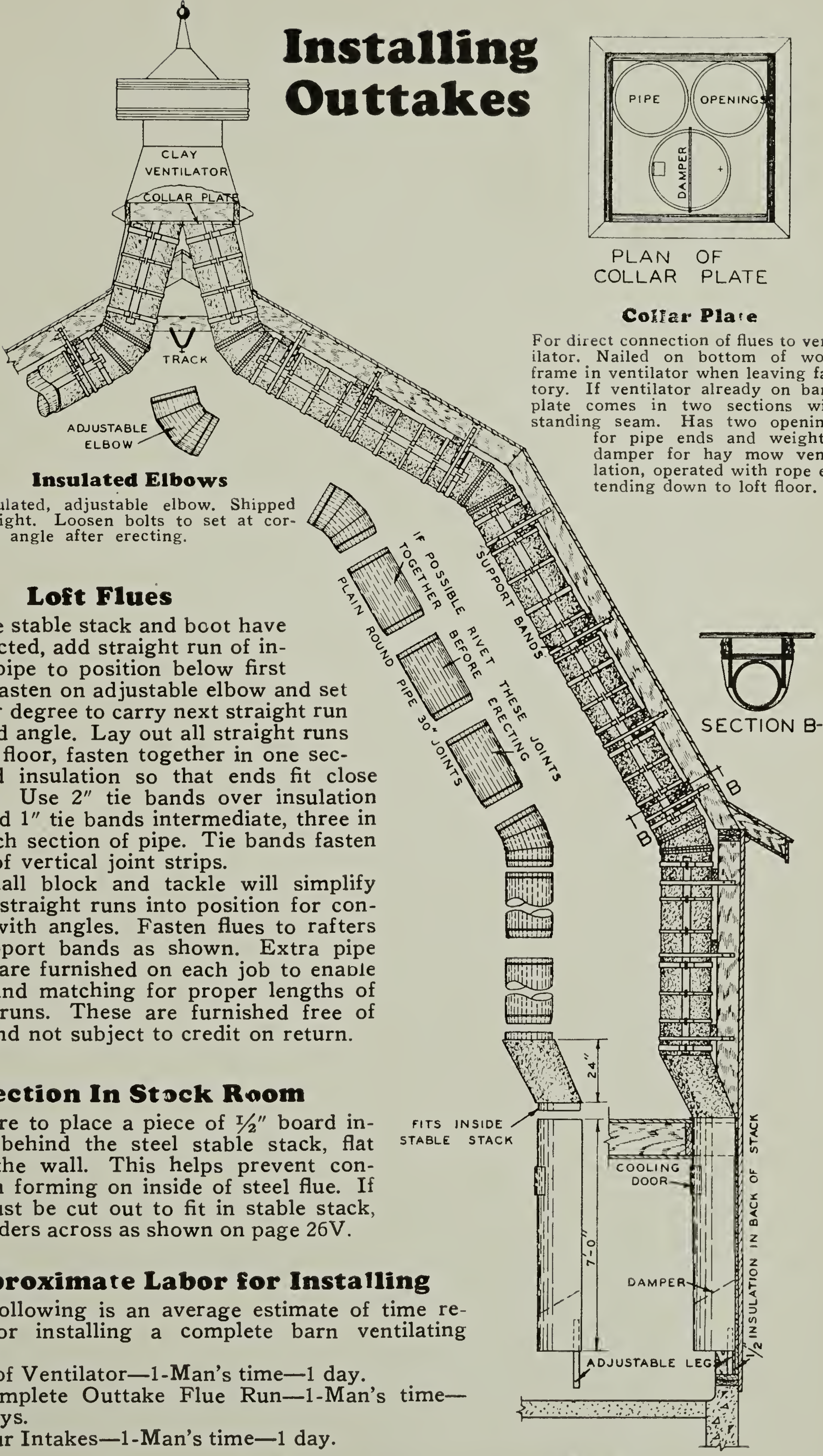
Section In Stock Room

Be sure to place a piece of ½″ board insulation behind the steel stable stack, flat against the wall. This helps prevent condensation forming on inside of steel flue. If joists must be cut out to fit in stable stack, place headers across as shown on page 26V.

Approximate Labor for Installing

The following is an average estimate of time required for installing a complete barn ventilating system.

Each Roof Ventilator—1-Man's time—1 day.
Each Complete Outtake Flue Run—1-Man's time—1½ days.
Each Four Intakes—1-Man's time—1 day.



Outtake Section—Gambrel Roof

Estimating Ventilators, Intakes and Flues

First find cubic contents of the stock room of the barn to be ventilated by multiplying the inside width by inside length by height of room. Figure "height" to loft floor if not ceiled under joists. If tight partitions divide barn treat each section as separate problem. Deduct from total area any closed rooms, such as harness, feed, tool rooms, closed stair wells, etc. If barn is L, T or U shape, figure each straight run of open room separately.

CUBIC AREA OF STABLE ROOM	**Height from Stable Floor to Peak of Roof**														
	Up to 20′			21′ to 25′			26′ to 29′			30′ to 35′			36′ And Up		
	Vents	Intk's	Flues	Vents	Intk's	Flues	Vents	Intk's	Flues	Vents	Intk's	Flues	Vents	Intk's	Flues
Up to 8000 C. F.	1	10	2	1	8	2	1	6	2	1	6	2	1	6	2
10000	1	12	2	1	10	2	1	8	2	1	8	2	1	8	2
13000	2	14	4	2	12	4	1	10	2	1	10	2	1	8	2
14500	2	16	4	2	14	4	2	12	4	1	12	2	1	10	2
16000	2	18	4	2	16	4	2	14	4	2	12	4	1	10	2
18000	2	20	4	2	18	4	2	16	4	2	14	4	2	12	4
20000	3	24	6	2	20	4	2	18	4	2	14	4	2	12	4
24000	3	30	6	3	24	6	3	20	6	2	16	4	2	14	4
28000	4	34	8	3	28	6	3	22	6	3	18	6	2	16	4
32000	4	38	8	4	32	8	3	26	6	3	22	6	3	20	6
36000	5	44	10	4	36	8	4	30	8	3	24	6	3	22	6

VENTILATORS : No. **127** or No. **130** CLAY VENTILATORS (See Reference to Hay Track Clearance, Page 30V).

INTAKES : **IT4-22B**—See Page 22V Collar plates **CP30** or CP27.

OUTTAKES : **No. SS1622** STABLE STACKS—**BLF18**″ INSULATED FLUE—ELBOWS—**AE18**-ELLS.

Estimating Insulated Loft Flues

Each run of outtake flue consists of the following:
1—Stable Stack—complete with adjustable legs, damper, cooling door, insulated boot, half round to round.
...Lineal Feet of Insulated flue (proper length to extend from loft floor to collar plate in vent).
...Adjustable Insulated elbows (Gothic and Gambrel roof barns 3 Elbows each run, Gable roofs—2 elbows).
...Number—Collar plates.

NOTE: Loft flues come with insulation cut to fit, all necessary tie bands, joint strips, support bands are also furnished.

Lineal Feet of Insulated Flue Required for Barn Loft

CHECK VERTICAL COLUMN AT LEFT FOR BARN WIDTH—CHECK HORIZONTAL COLUMN FOR HEIGHT. FLUE MEASUREMENTS INCLUDE NECESSARY EXTRA LENGTH FOR CUTTING AND MATCHING.

Outside Width Of Barn	**Height from Stable Floor to Peak of Roof**								
	18-19-20-21′	22-23-24′	25-26-27′	28-29-30′	31-32-33′	34-35-36′	37-38-39-40′	41-42-43-44′	45-46-47-48′
20′-22′-24′-26′	17½′	20 ′	22½′	25 ′	27½′	30 ′	32½′		
28′-30′-32′	20 ′	22½′	25 ′	27½′	30 ′	32½′	35 ′	40 ′	42½′
34′-36′-38′	22½′	25 ′	27½′	30 ′	32½′	35 ′	37½′	42½′	45 ′
40′-42′-44′	25 ′	27½′	30 ′	32½′	35 ′	37½′	40 ′	45 ′	47½′
46′-48′-50′		30 ′	32½′	35 ′	37½′	40 ′	42½′	47½′	50 ′

Directions for Using Estimating Charts

To determine correct number of CLAY Ventilators, outtake flues and intake regulators necessary for complete guaranteed ventilation of your barn, first refer to chart on page 28V. After determining cubic foot area of stock room, get correct height of barn from stock room floor to peak of roof. In the space where the two columns meet will be found correct number of ventilators, intakes and outtakes needed. In ordering outtakes, remember stable stacks, adjustable insulated elbows, straight runs of insulated flues and collar plates are each separate items. No measurements except height of barn are necessary to order proper lengths of insulated loft flue. Merely refer to chart on this page. With barn width (outside) and height from stable FLOOR to PEAK of roof determined, you need only refer to space where the two columns meet. This number represents correct lineal footage of each foul air flue run in LOFT to make proper connection from stable stack boot to ventilator collar plate. Adjustable elbows must be added as separate items.

Write Us For Price List

Information for Ordering Clay Barn Ventilating System

With the information given in the charts on pages 28V and 29V you can now estimate and order the complete guaranteed CLAY Ventilating system for your barn. With installing instructions contained in this book you should experience no difficulty in putting the units in the building.

For your guidance in ordering a complete system for your barn, we have worked out here an example which you can refer to, so that you may check your estimate of your own barn to make sure you have arrived at proper number of units required, lengths of flues, etc.

EXAMPLE: Barn 34x50 outside. Stock room floor to loft floor, 8 ft. Height from stable floor to peak of roof, 30 ft.

Presuming this barn has a 6″ studding wall, insulated inside, our stock room area would be as follows:

33 x 49 x 8 equals 12936 cubical space.

From the chart on page 28V, we find that a barn with cubic space under 13,000 cubic feet and measuring 30 ft. from floor to peak, requires the use of 1 ventilator, 8 intakes, 2 outtakes.

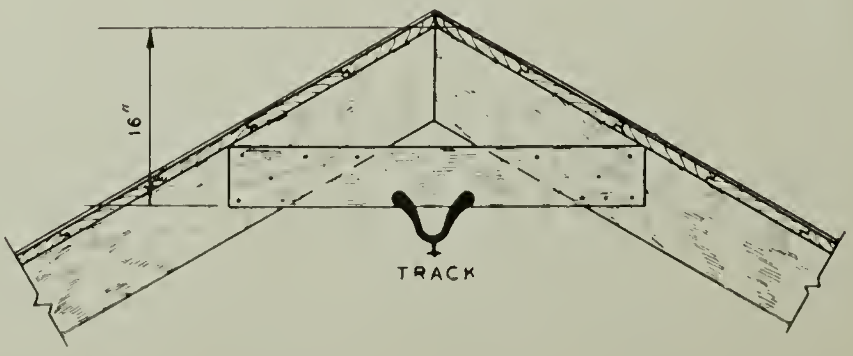
From the chart on page 29V we determine that the number of lineal feet of insulated flue required in the loft, for a barn 34 ft. wide and 30 ft. from stable floor to peak of roof equals 30 ft. (Includes extra lengths for cutting and matching.)

With the above information we list below a proper order for the complete ventilating system, using catalog reference numbers for each item.

Order Form

	QUANTITY	CATALOG REFERENCE	PRICE EACH	TOTAL
Ventilators	1	**No. 130**		See price list
Collar Plates	1	**CP30**		See price list
Intakes	10	**IT-4-22-B**		See price list
Stable Stacks	2	**SS1622**		See price list
Barn Loft Flue	2	**BLF18**—18″—30 ft. = 60 ft. @	(per ft.)	See price list
Adjustable Elbows	6	**AE18**—18″ Ell	(each)	See price list

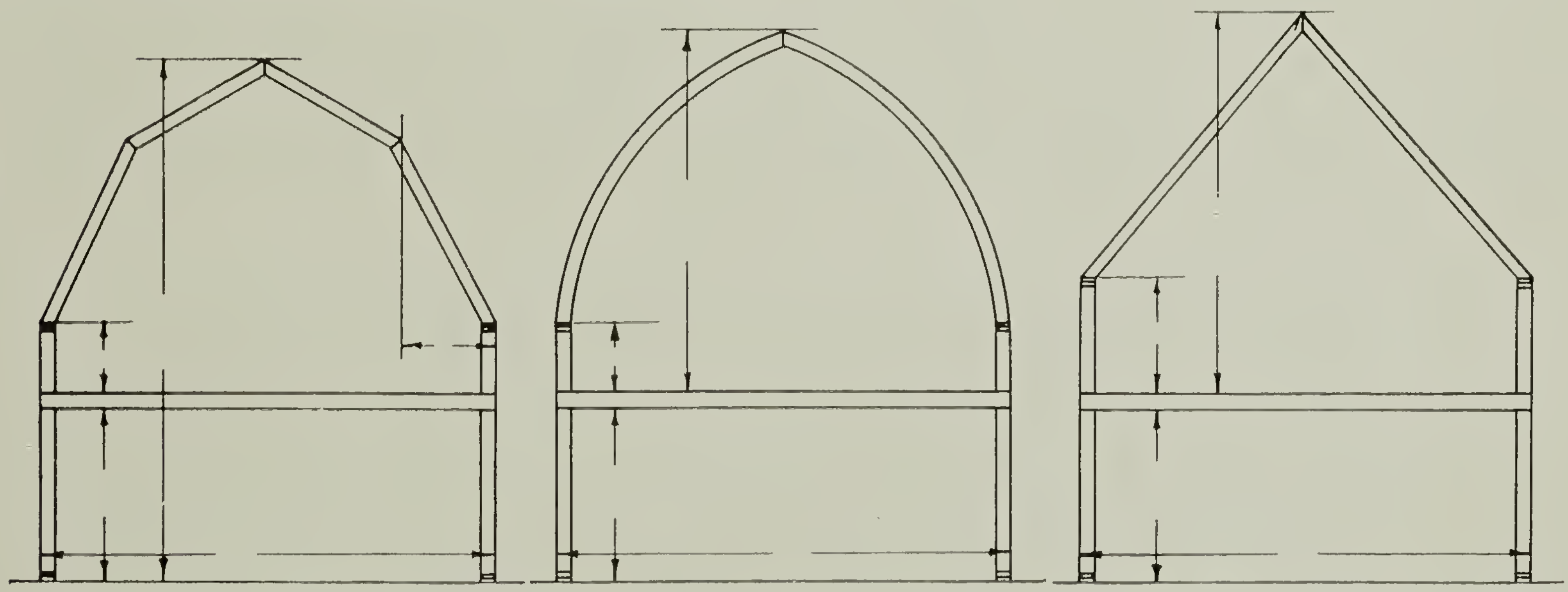
If hay carrier track is less than 16″ below peak of roof always use No. 130 CLAY Ventilator to insure proper clearance of round flues. With track 16″ or more below peak, it is reasonably safe to use No. 127 Ventilator.



Information Sheet and Order Form

Send Us This Page—Filled In—With Order

1. Name ______________ Address ______________
2. Length ______________ Width ______________
3. No. Animals ______ Horses ______ Cows ______ Young Stock ______ Calves ______
4. Wall Construction ______________
5. Is wall lined inside? ______________ Joists? ______________
6. Size of joist and spacing ______________
7. If masonry wall, do joists rest on wall? ______________
   or sill? ______________
8. Length and size of rafters—upper ______________
   lower ______________
9. Is this basement or banked barn? ______________
10. Is there a driveway to mow floor? ______________



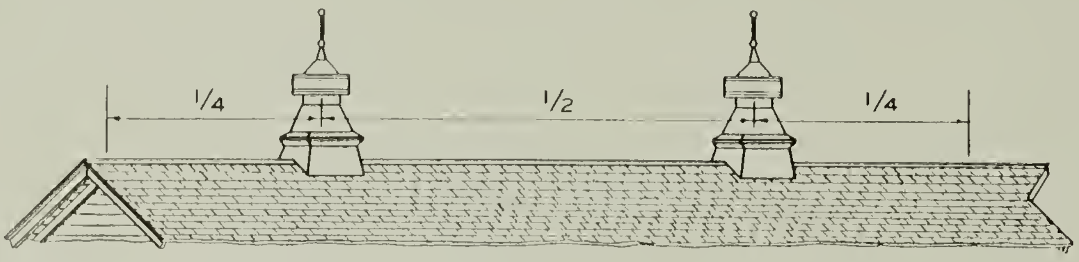
Fill in Above Between Arrows—Which Is Your Barn?

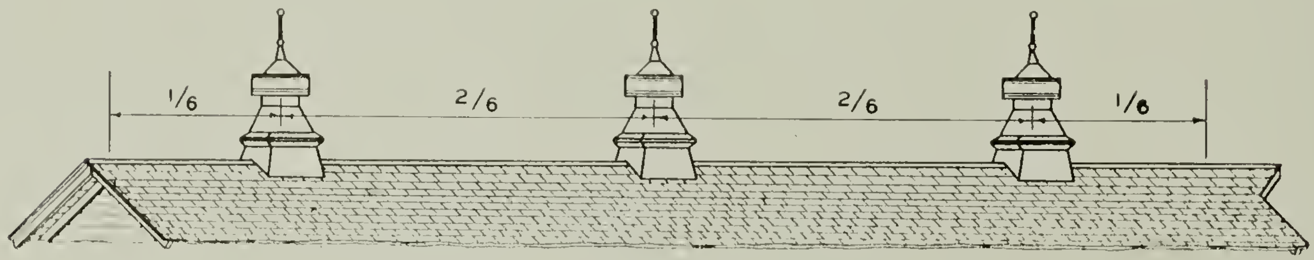
Order Form

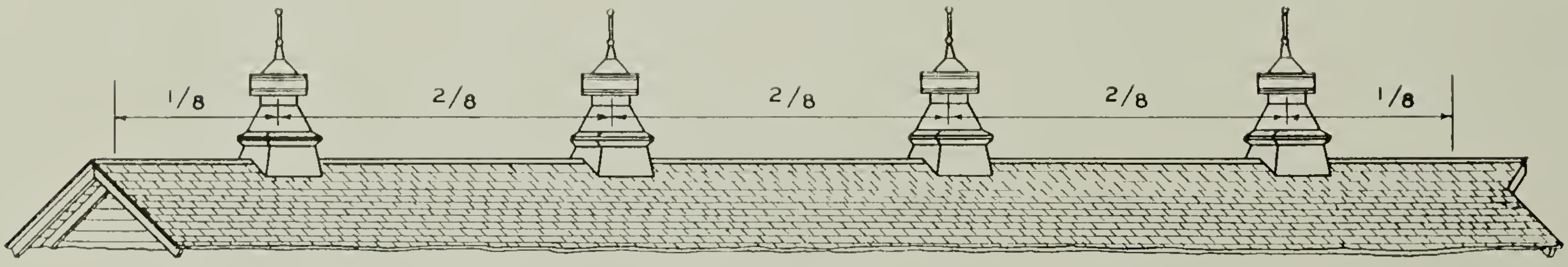
	QUANTITY	CATALOG REFERENCE	PRICE EACH	TOTAL
Ventilators				
Collar Plates				
Stable Stacks				
Barn Loft Flue (No. feet)			per ft.	
Adjustable Elbows				
Intakes				
Extras . . . . (Such as deflectors, special boots, etc.)			each	
			TOTAL	

Spacing Ventilators On Roof

Ventilator heads should always be spaced evenly. By this is meant the space from the end of the roof to first ventilator head will be just one-half the distance between the ventilator heads. Starting with one unit, the head should be located central of the barn length and the additional diagrams below show division of space for two, three and four heads.





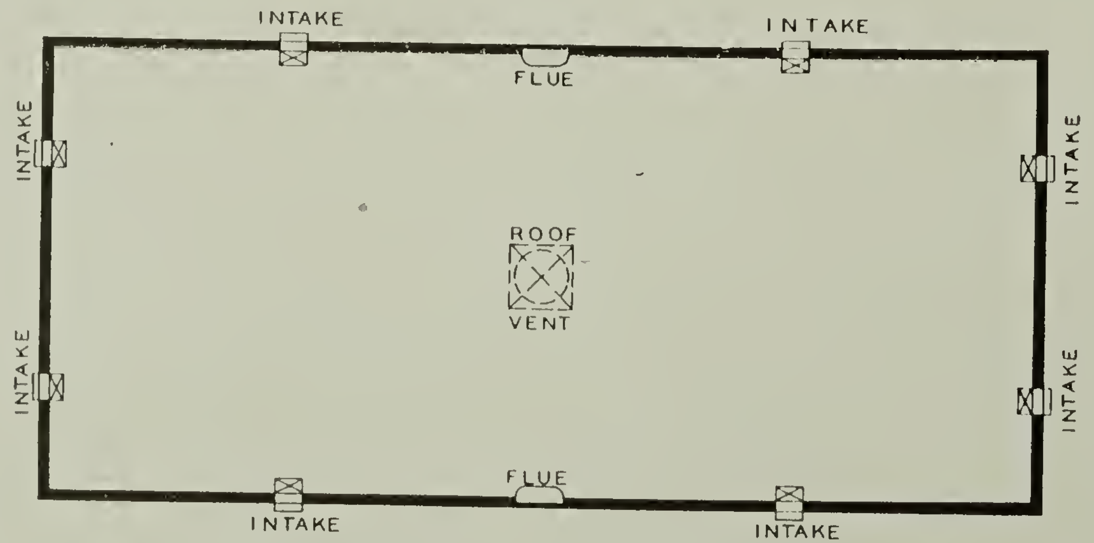


Spacing Flues and Intakes

Each roof ventilator can accommodate two outtake flues. The flues should run as directly straight down along roof line from ventilator as possible. If door or window interferes, offset flue as near directly under ventilator as possible. Flues can be offset up to 8 feet away from center of ventilator head on roof, either direction. Adjustable elbows in loft can be angled to bring flue up under heads. Intakes should not be installed closer than 4 feet from any corner of building or closer than 6 feet on horizontal from outtake flue. It is not necessary to extend intake opening to center of building if barn is less than 36 feet wide.

Typical Installation—2 Flues—8 Intakes

Barn—34′ x 40′

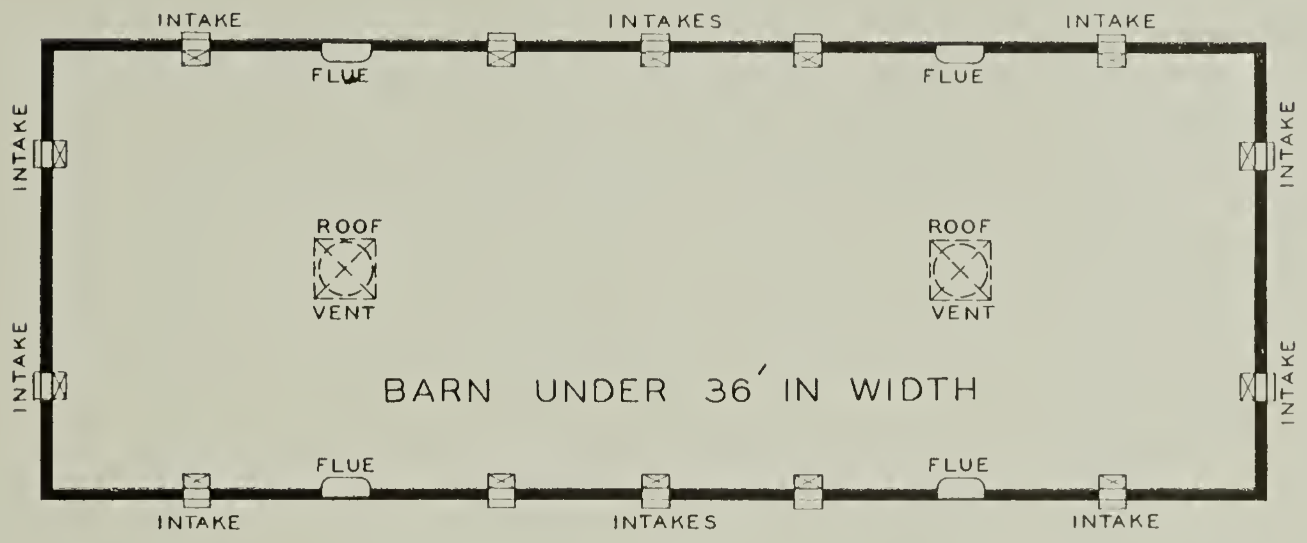


BARN UNDER 36′ IN WIDTH

Spacing Flues and Intakes

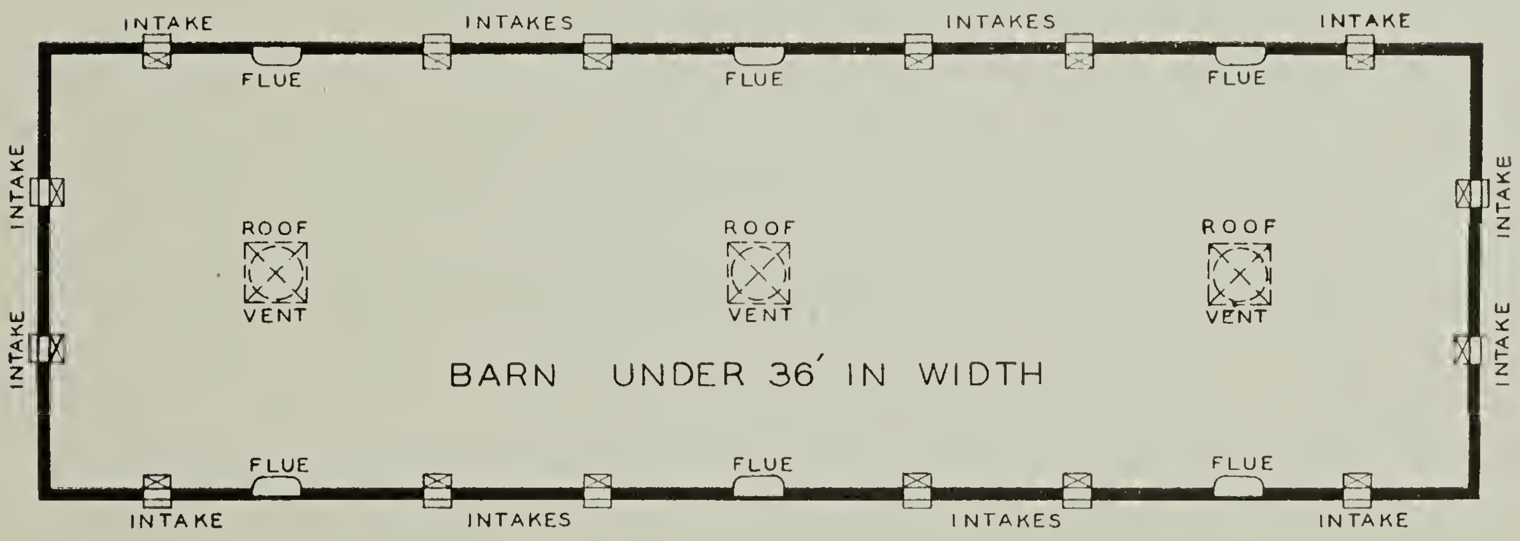
Typical Installation—4 Flues—14 Intakes

Barn—34′ x 80′



Typical Installation--6 Flues--16 Intakes

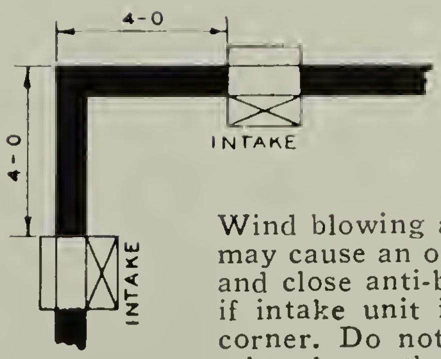
Barn—34′ x 120′



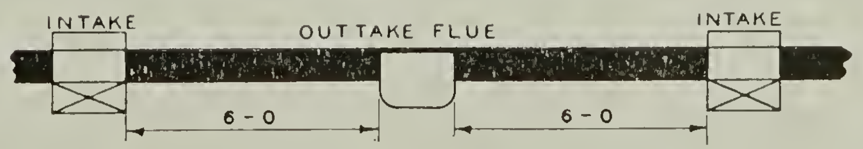
Distributing Intakes—Barns Less Than 36 Feet Wide

The following table should be followed in locating intakes, to insure correct distribution of air in barns less than 36 feet wide.

TOTAL INTAKES USED	PLACE IN EACH SIDEWALL	PLACE IN EACH ENDWALL
6	2	1
8	2	2
10	4	1
12	4	2
14	6	1
16	6	2
18	8	1
20	8	2



Wind blowing around corners may cause an outward suction and close anti-backdraft valve if intake unit is too close to corner. Do not install an intake closer than 4 feet from any corner, as shown here.



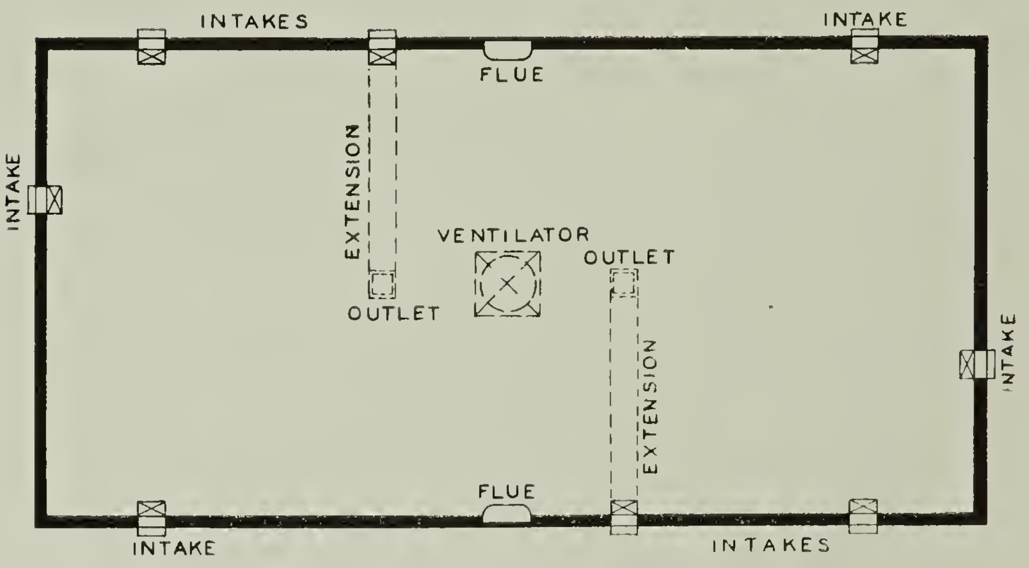
Do not install an intake closer than 6 feet from any foul air flue, as shown here otherwise a short-circuiting of incoming air toward outtake may occur.

Spacing Flues and Intakes

Barns 36 Wide and Wider

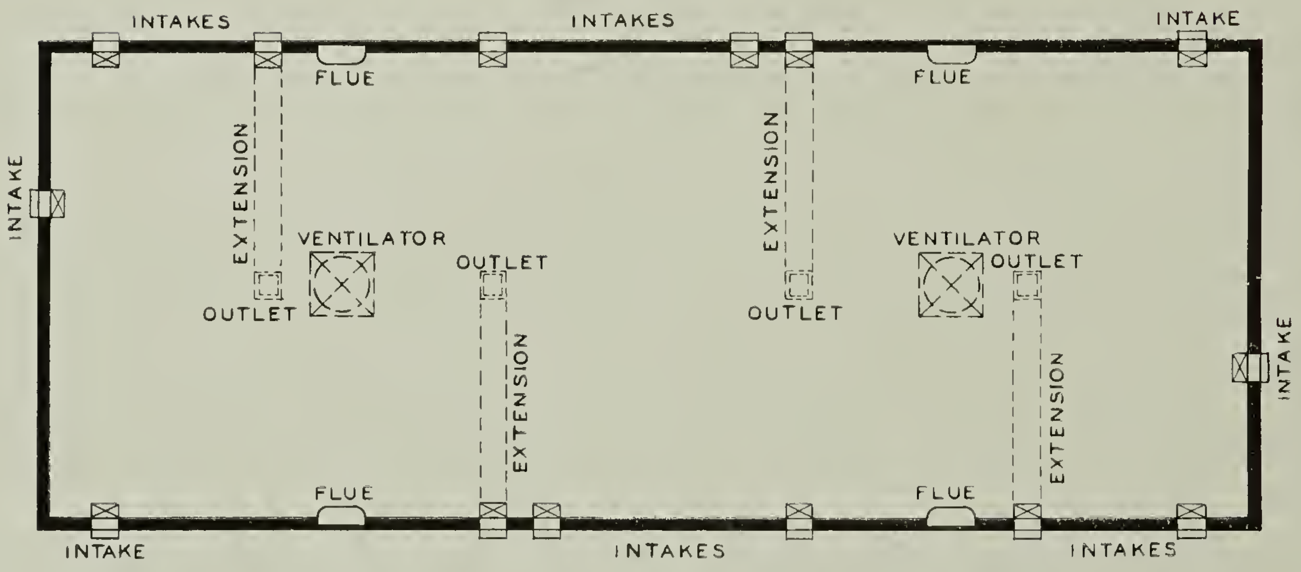
Typical Installation—2 Flues—8 Intakes

Barn—36′ x 40′



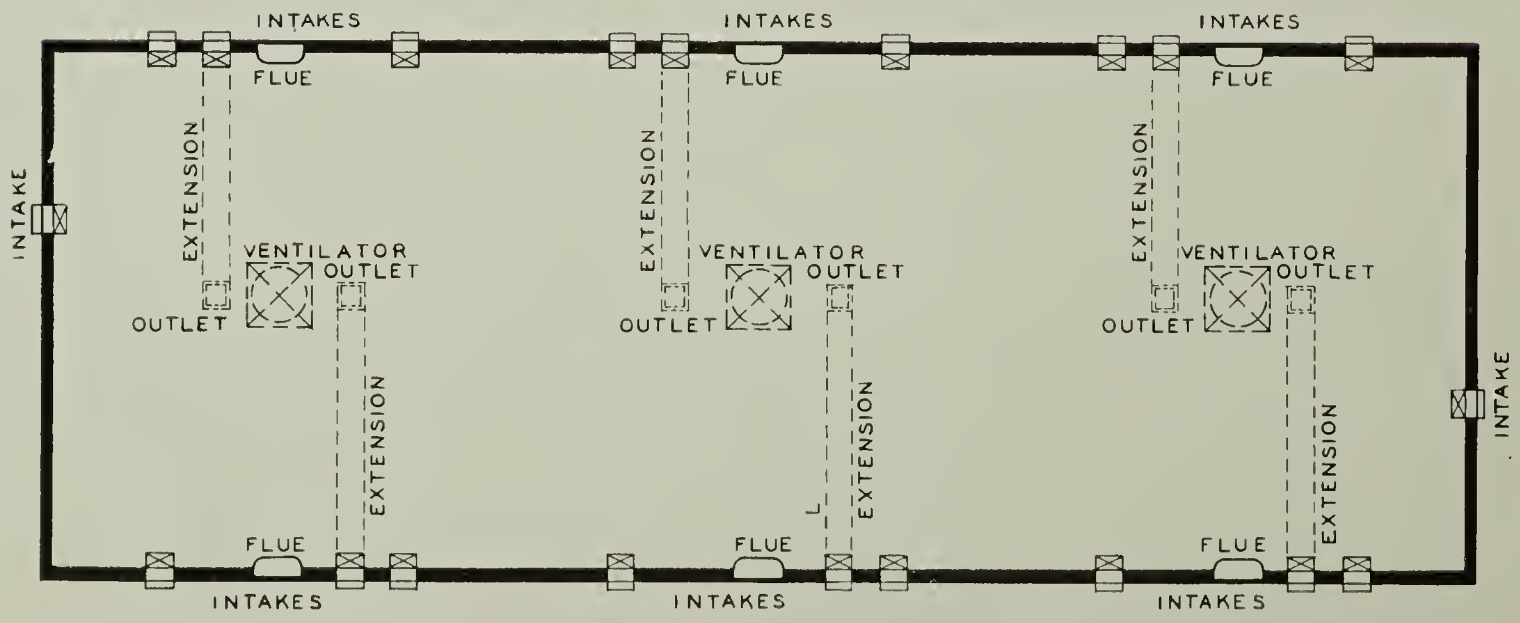
Typical Installation—4 Flues—14 Intakes

Barn—36′x 80′



Typical Installation—6 Flues—20 Intakes

Barn—36′ x 120′

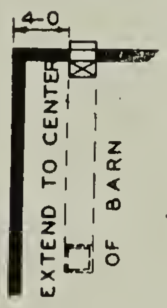


Intake Extensions—Air Diffusers

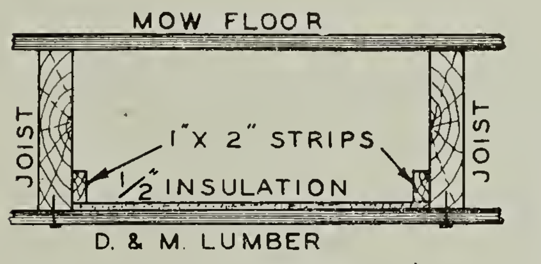
In barns 36 ft. wide or wider, it is necessary to carry the outlet of some of the intake units to the center of the barn. Typical installation plans on page 34V show how these extensions are distributed. The following table gives correct distribution of intakes around walls of barns 36 ft. wide or wider.

TOTAL INTAKES USED	EACH SIDE WALL	EACH END WALL	EXTENDED TO CENTER
6	2		2
8	2	1	2
10	4		2
12	3	1	4
14	4	1	4
16	5	1	4
18	6	1	4
20	6	1	6
22	6	1	8
24	6	1	10

Of those intakes to be extended to the center of the barn, admit half from each side wall, as shown in typical plans on page 34V.



If intakes can not conveniently be installed in end walls because of the type of wall construction, the sketch to the left shows how an extended intake may be substituted. This extension may come to the center of the barn. Do not locate it closer than 4 ft. from corner of building.

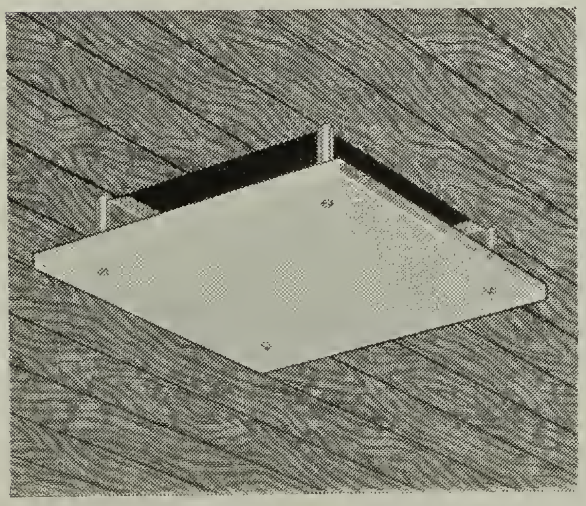


END VIEW

Fresh Air Duct Using Space Between Joists

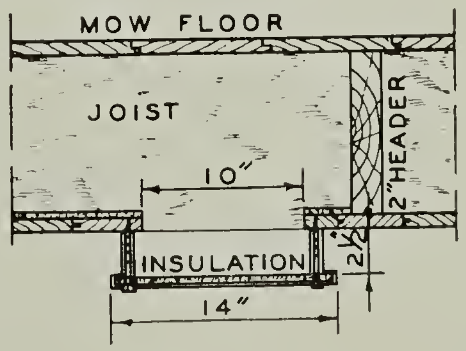
To extend the opening for admission of air from the intake unit, the space between the joists of barn can usually be used. On the left is a sketch showing how to enclose this space. Be sure and use BOTH INSULATION AND LUMBER TO PREVENT CONDENSATION FORMING UNDER CEILING. In zone one, 1″ insulation should be used. In the lower right hand sketch is shown method of placing header between joists at center of barn, to end the extension. Use CLAY air diffuser as described, below the 10″ x 10″ opening at bottom of space between joists.

Air Diffuser



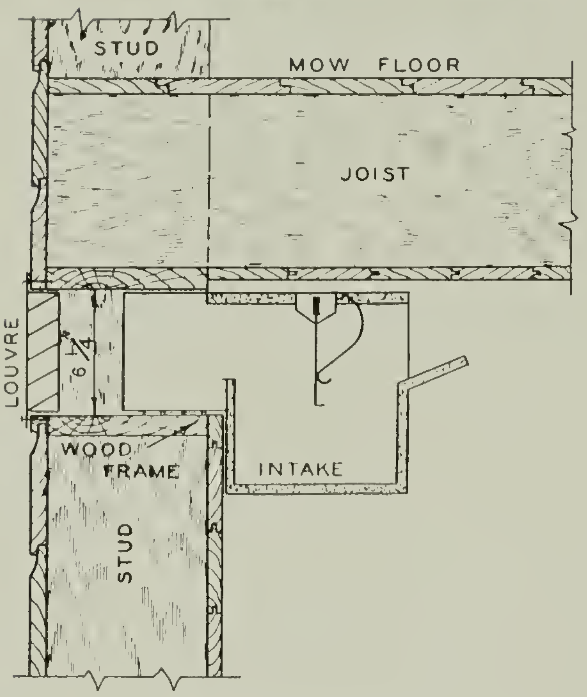
The CLAY Air Diffuser is designed for installation below openings in extended intake ducts, is 14″ x 14″ square, 26 gauge copper-bearing steel, around ½″ stiff board insulation. Prevents direct down draft.

AD14—Air Diffuser, complete with peg hangers and 4″ mounting screws. Wt. each, 2 lbs.



SIDE VIEW

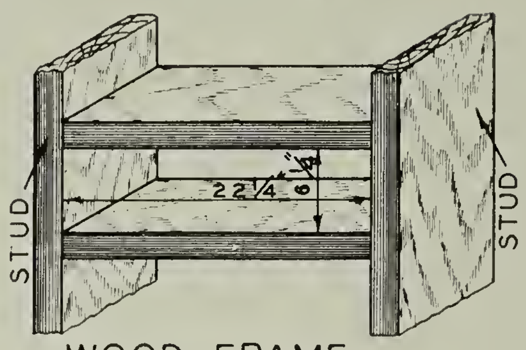
Installing Intake Regulators



SIDE VIEW
WALL FRAME

Note

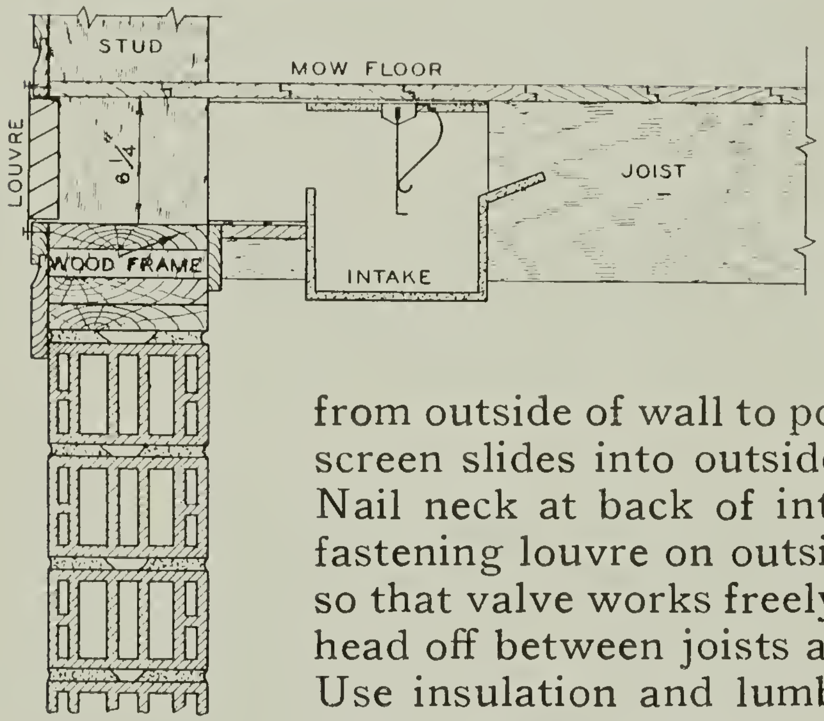
Intakes on this page do not show the manual control. For details see page 23V.



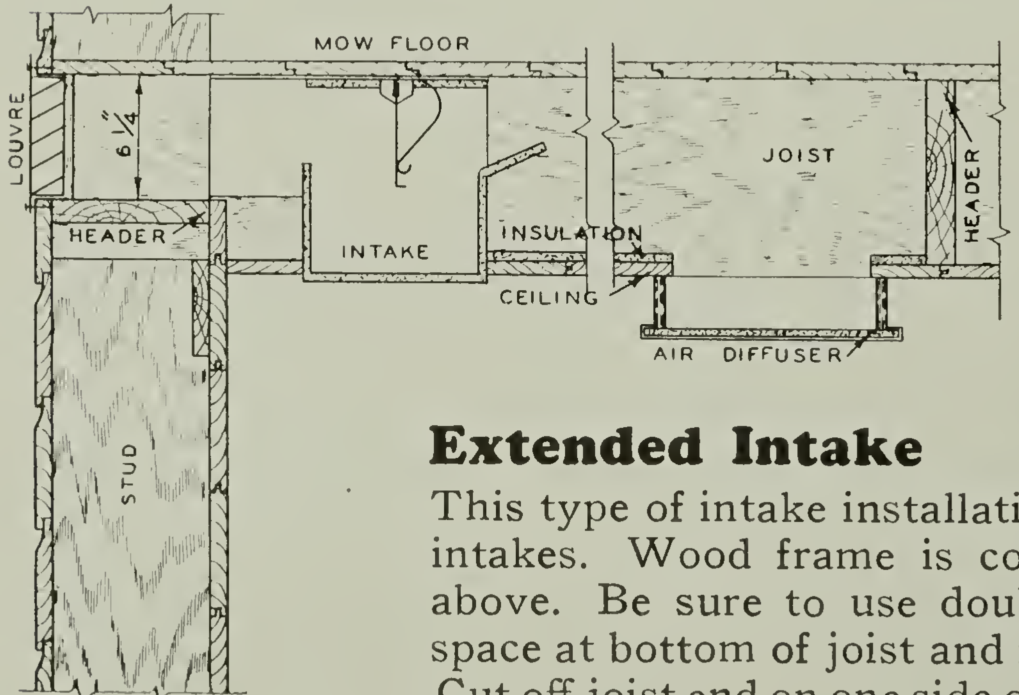
WOOD FRAME
FOR INTAKE

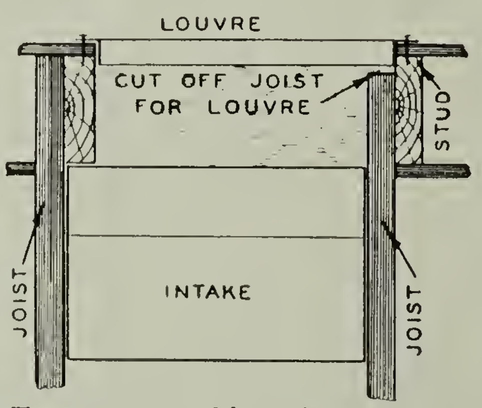
Showing installation of intake box in side wall of lumber construction. Build a 1″ wood frame, level with bottom of joist as shown. Inside dimensions of frame 6¼″ x 22¼″, set plumb and level. Slide steel neck at back of box into wood frame and nail through sides. Be careful not to spring box out of shape as damper may bind.

Masonry Wall



Where a masonry wall, already built, makes cutting a hole below joist level impractical, use method of installation shown to left. Build a frame between joists as shown, same dimensions as shown at top of page. Frame should extend from outside of wall to point even with inside of wall. Louvre screen slides into outside of wood frame, nailed all around. Nail neck at back of intake box inside wood frame before fastening louvre on outside. Be sure that intake box is level so that valve works freely. If barn is to be ceiled under joists, head off between joists at a point 18″ in front of intake box. Use insulation and lumber to close off space at bottom of joists, using air diffuser under 10 x 10″ opening as described on page 35V.





Top view looking down.

Extended Intake

This type of intake installation is used for all extended intakes. Wood frame is constructed same as shown above. Be sure to use double insulation to close off space at bottom of joist and fit tight around intake box. Cut off joist end on one side of intake to allow space 22¼″ wide for louvre. See page 35V for detail of joist extension.

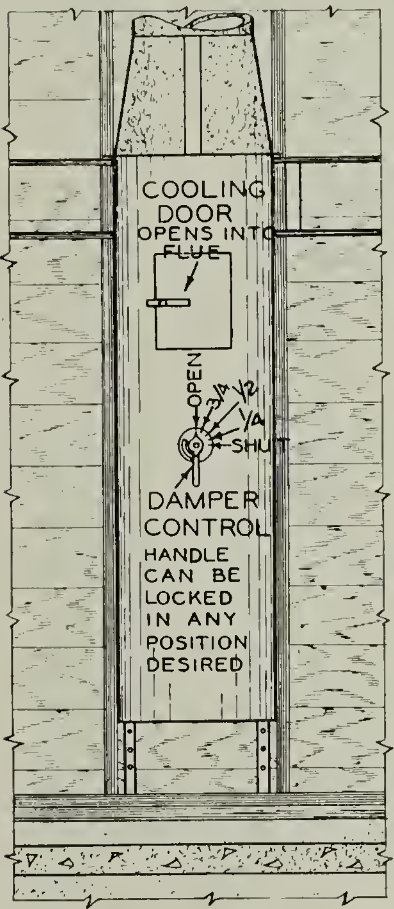
Instructions for Operating System

General Information

Keep all doors, windows, hay doors, etc., closed during cold weather.

Use collar plate damper for hay mow ventilation in summer.

Close damper in collar plate in cold weather. See that all doors and windows leading from mow are closed in winter.


COOLING DOOR OPENS INTO FLUE
OPEN
1/2
1/4
SHUT
DAMPER CONTROL
HANDLE CAN BE LOCKED IN ANY POSITION DESIRED

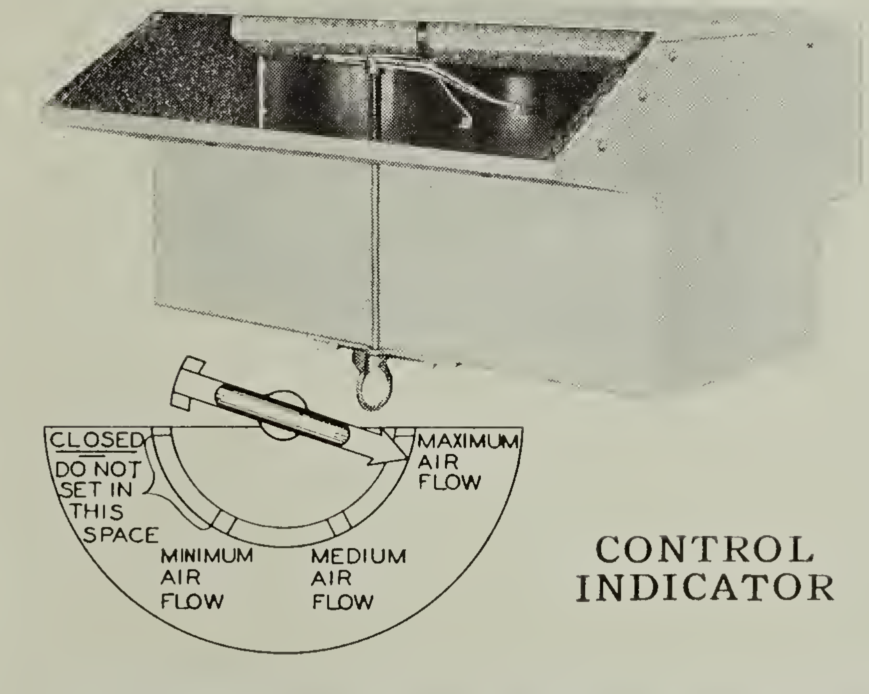
If foul air flue comes down in a calf pen, place a guard rail around bottom of flue to prevent calves getting within 2 ft. of flue opening at bottom. In cow or bull pen place cribbing or pipe rail to protect flue from being jammed.

See that at least 2 ft. of hay covers entire mow floors. Bare spots on mow floors result in cold surface underneath where moisture may precipitate.

The presence of moisture on walls or ceiling need not mean the system is not functioning properly. Improper building construction or lack of animal heat may be the cause. (See pages 16V and 17V.)

Outtake Flue

Open cooling door at ceiling only when a lower barn temperature is desired. Close stable stack damper completely when opening cooling door. Quadrant indicates degree damper is closed by arrow on control handle. If stable is not completely filled with stock, do not close all intakes in empty portion, but close alternate intakes in entire building. If any intakes are closed off completely, regulate flue dampers accordingly, thus, with one-third of all intakes in barn closed off, close all flue dampers one-third, etc.



CONTROL INDICATOR

Intake Regulator

Allow control indicator on bottom of box to remain at "maximum" air flow as long as stable temperature is satisfactory. Intake control can be set to reduce air flow if stable becomes too cold. Do not close off intake entirely.

As a rule, the following regulation will give most satisfactory results. During periods when outdoor temperatures are 20° above zero or higher, set all intakes at "maximum" air flow. When between zero and 20° above zero outdoors, north wall intakes at "Minimum," balance at "medium" air flow. When outdoor temperatures are below zero, set all intakes at "minimum" air flow. If moisture appears in stable during extreme weather and stable temperature permits, move indicators on all intakes to "maximum" air flow, except those in north wall.

To close intakes entirely, move indicator to "closed" position.

Clay Guarantee of Results

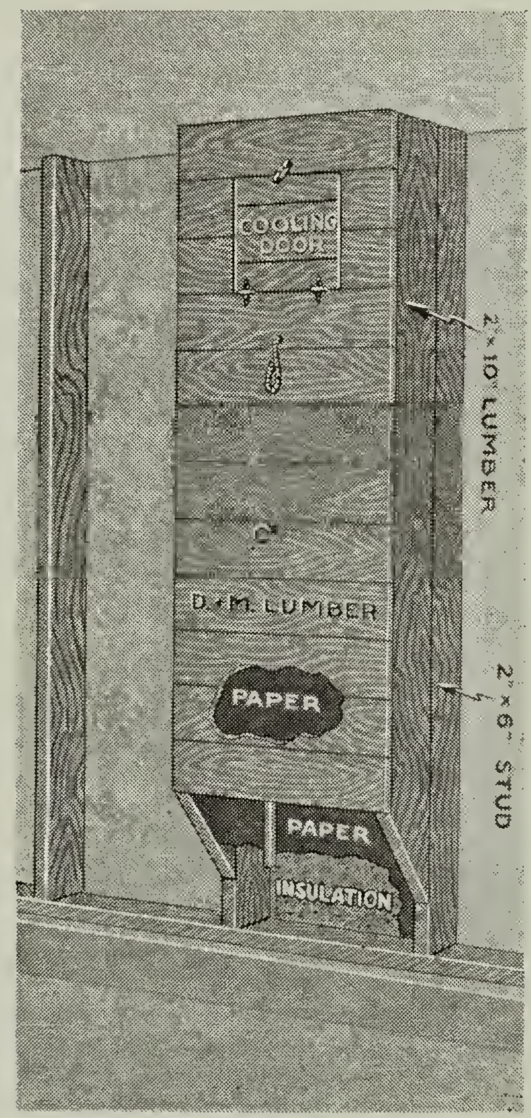
The CLAY Ventilating System is guaranteed to circulate 3542 cubic feet of air per hour per cow, 4296 cubic feet of air per hour per horse, when the building is closed in cold weather and the system is installed and operated according to instructions furnished. It is further guaranteed that this circulation will remove the excessive moisture and that the room will contain no more than 3.3% of the air once breathed. Walls and ceilings will be free of moisture providing there is less than 7 degrees temperature difference between air of room and wall surface.

Building Outtakes of Lumber

In some barns the outtake flues can be constructed right in the walls of the building, from the stock room floor to the peak of the roof, by the use of additional lumber, insulation and building paper. While the steel flue is most desirable from a standpoint of long life, it is our purpose to assist you in securing good ventilation as economically as possible. Saving on the complete cost of a ventilating system by constructing flues as shown here as compared with an all-steel installation will depend on several things, such as, cost of materials, labor, etc. With instructions given herein, good workmanship and materials used, the results obtained will be as outlined in our standard barn ventilation guarantee.

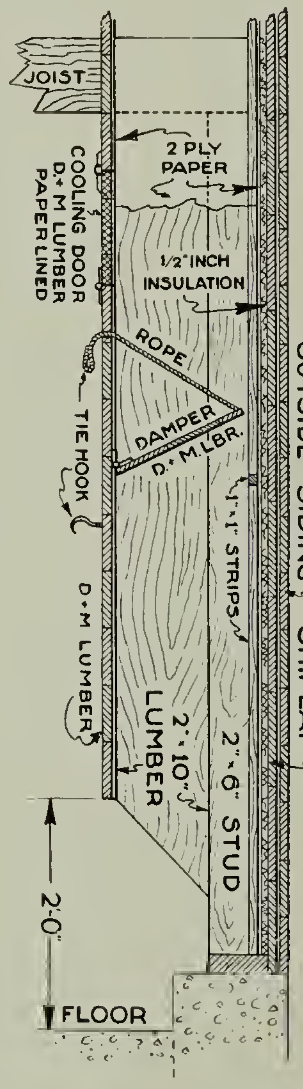
Estimating Requirements

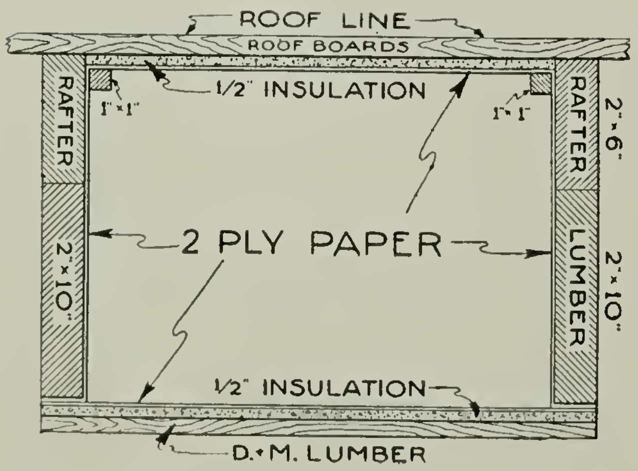
Determine proper number of ventilators, outtakes and intakes from chart on page 28V. Order CLAY Ventilators, collar plates and intake regulators same as for steel flue system. Also order proper number of special insulated steel boots for connecting top of wood flue to collar plate of ventilator. See sketch page 39V. Build wood flues of proper size and number as shown here and as outlined in diagrams on pages 32V-33V-34V.



Stock Room Foul Air Flue

These illustrations show method of constructing stock room section of outtake in wall of 2 x 6″ studding construction, using lumber, insulation and building paper. Insulation is placed in back of flue to prevent warm air depositing moisture on cold walls of outtake. The entire stock room section should be lined with a heavy paper. The construction shown here should be followed from loft floor to barn floor. For construction above loft floor, see detail below and on page 39V.





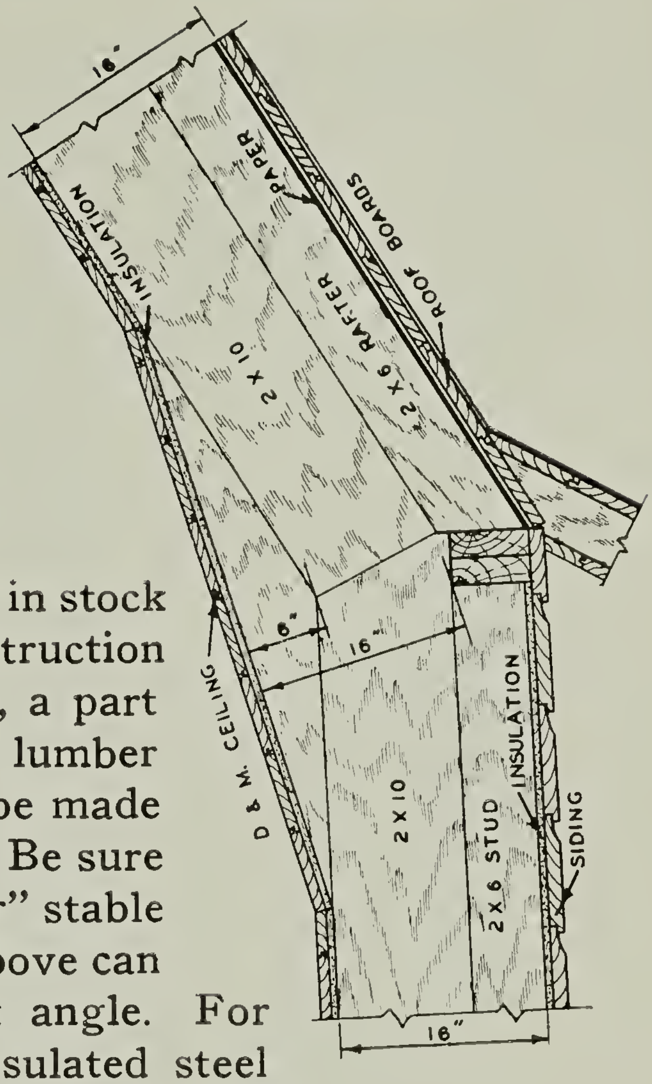
Construction of Lumber Flue in Loft

To the left is a cross-sectional view of proper lumber flue construction in loft, using and adding to space between rafters. This applies where rafters are 24″ on center. If rafters are 2 x 4—add 2 x 12″ piece to give required depth. Note insulation material used both back and front of duct. Line all four sides with heavy building paper as shown.

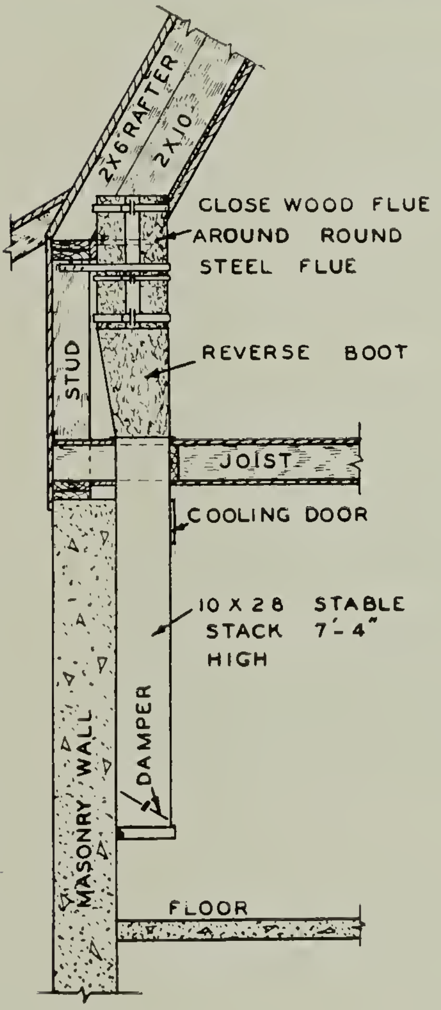
Building Outtakes of Lumber

Construction at Plate

Illustration at right shows method of carrying out full depth of wood flue at plate or purline. By using a triangular piece of lumber with a depth of 6″ where plate appears no loss of flue depth is incurred.



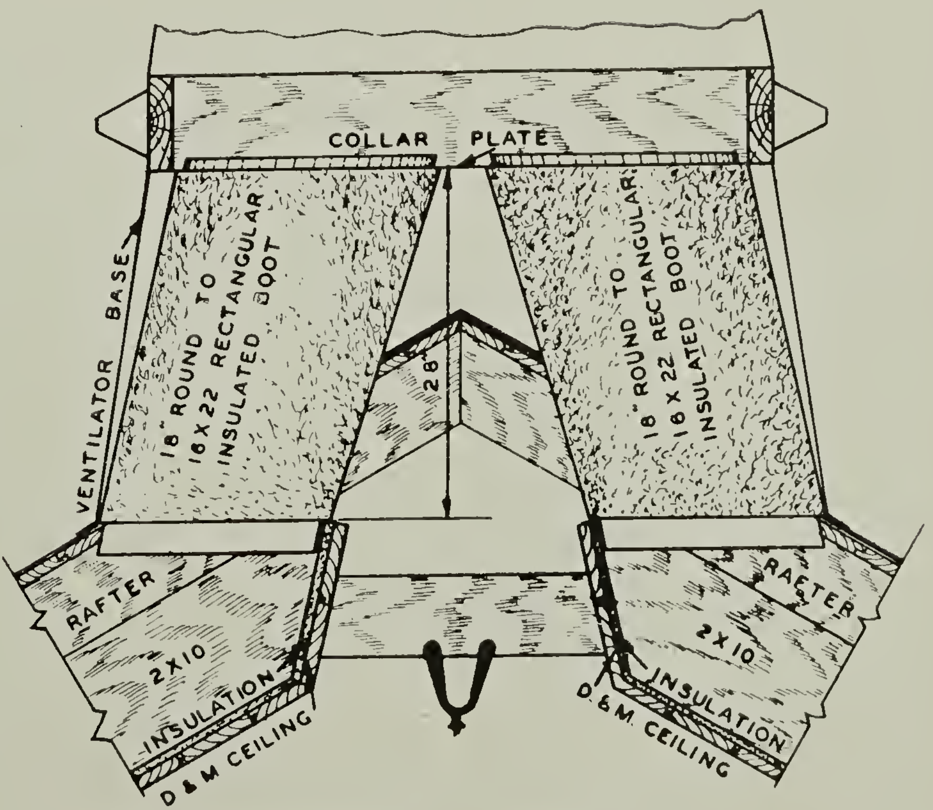
Part Lumber Construction


2X6 RAFTER
2X10
CLOSE WOOD FLUE AROUND ROUND STEEL FLUE
STUD
REVERSE BOOT
JOIST
COOLING DOOR
10 X 28 STABLE STACK 7'-4" HIGH
DAMPER
MASONRY WALL
FLOOR

Where masonry wall in stock room prevents construction of wood flue in wall, a part steel flue and part lumber flue installation can be made as shown at the left. Be sure to order "rectangular" stable stacks so that boot above can be reversed to back angle. For proper lengths of insulated steel flues for connection from top of boot to wood flue, measure from loft floor to top of plate, deducting 2 ft. for boot which is part of stable stack. Order required stable stacks, proper number lineal feet insulated flue, special collar plate boots, collar plates and ventilators.

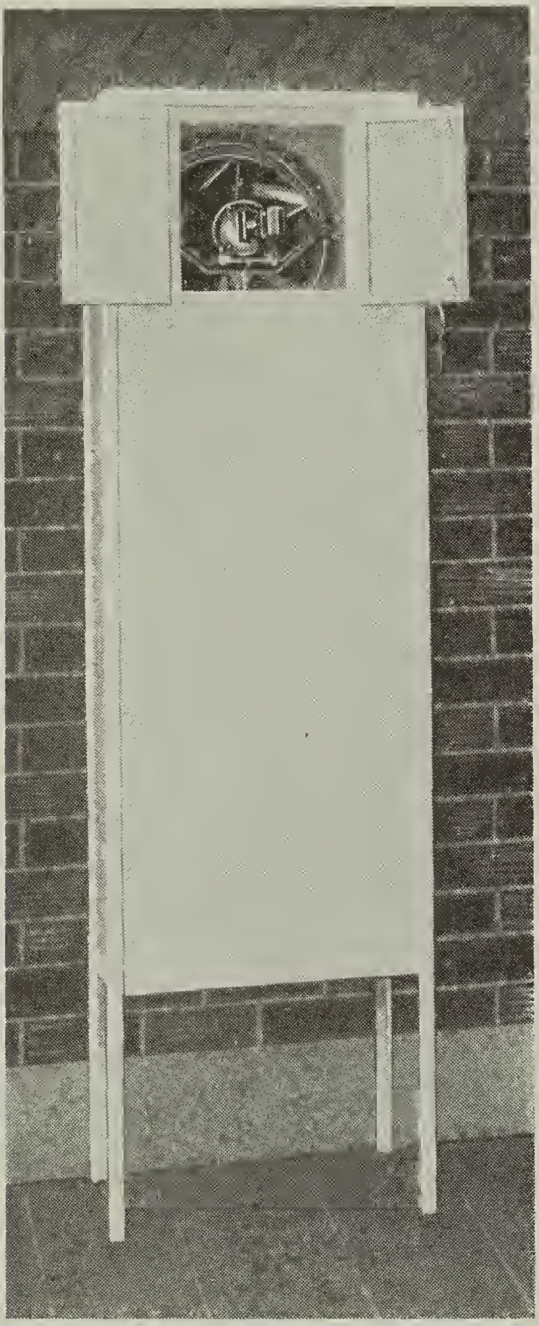
Special Collar Plate Boots—Lumber Flue

To properly connect wood flues to collar plates in ventilator requires one **CPB18-16** special boot for each outtake. Boot is 18″ round at top for connection to round opening in collar plate and 16 x 22″ at bottom for fitting into lumber flue. Comes complete with insulation applied at factory. Install boot in collar plate and then build end of lumber flue around outside. Make all connections tight to prevent air leakage. See page 25V for more detail.

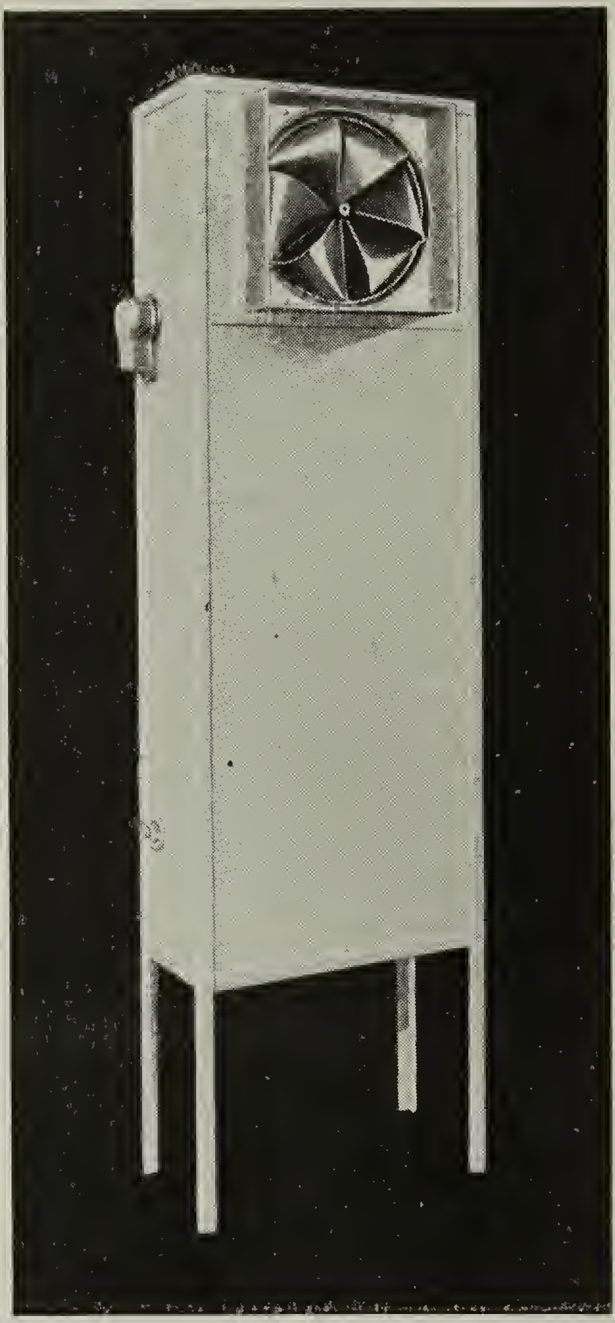


See page 25V for these special Boots and Collar Plates.

Clay Electric Ventilation



Cabinet mounted on wall, cooling doors open.



Illustrating wall side of cabinet.

WITH AUTOMATIC CONTROL

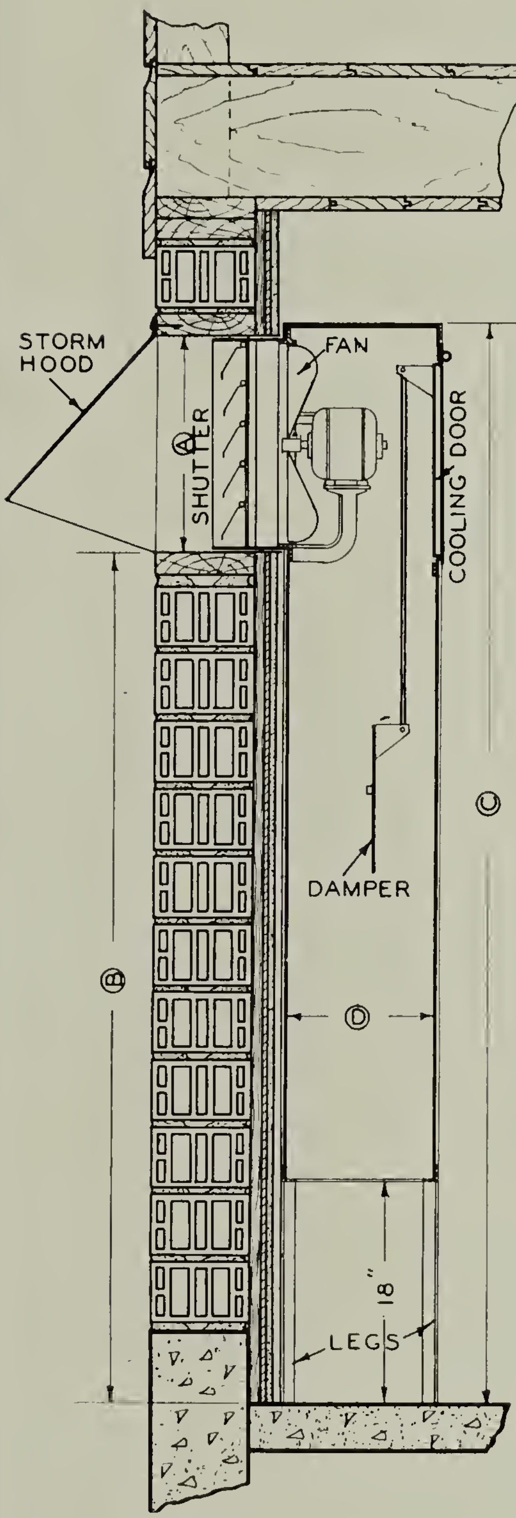
The CLAY Electric fan unit is designed for installation in farm buildings where electric current is available. Constructed in the form of a completely equipped cabinet it is the most desirable type of fan system obtainable. It makes possible the removal of air near the floor line for heat preservation in cold weather as well as providing means of removing air from the ceiling line in summer. Cabinet comes equipped with Mercoid thermostatic control, attached, and requires only the connection of the two wires of the light circuit to the wires extending from the cabinet, with a snap switch along the wall for complete cut-off when desired. Installation of CLAY electric fan units together with automatic intake regulators as recommended on page 43V, insure proper ventilation of your building with little or no attention necessary to the operation. Furnished without Mercoid if desired. An estimate of average annual cost of operation of the CLAY fan unit in a barn is approximately $10.00 per year. This is certainly a very reasonable expenditure for completely automatic and efficient ventilation. The fan in the CLAY cabinet is unusually quiet in operation, making it most desirable for installation in livestock buildings. (See page 41V for outside automatic shutters.)

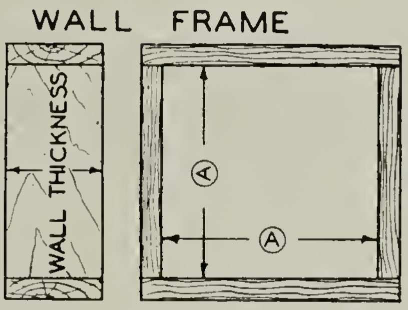
EFU12 Electric Fan Cabinet (Complete with 12″ fan, mercoid thermostat, automatic shutter, cooling doors and damper.) Supplied for 110, 220 volt single phase current or 32, 110, 220 volt direct current. Fans furnished for handling 600 C. F. M. or 900 C. F. M. at 1070 and 1725 R. P. M. respectively. Cabinet 10″x18″x7′ 4″ high. Estimated shipping weight, 217 lbs.

EFU16 Electric Fan Cabinet complete as above with 16″ fan and supplied for same types of current. Cabinet 12″x26″x7′ 4″ high. Estimated shipping weight, 271 lbs.

EFU18 Electric Fan Cabinet, complete as above with 18″ fan and supplied for same types of currents. Cabinet 14″ x 26″ x 7′ 4″ high. Estimated shipping weight, 335 lbs.

Electric Floor Exhaust Cabinet



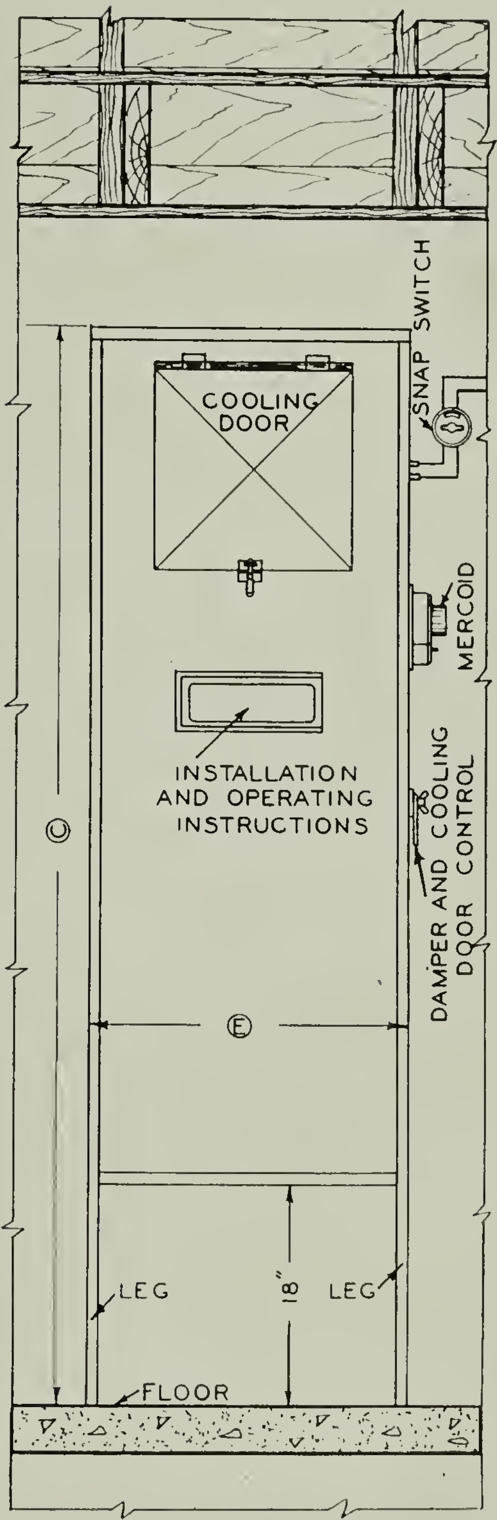


STANDARD DIMENSIONS

Size Unit	Dimensions A	B	C	D	E
EFU12	13⅜"	6'-1¼"	7'-4"	10"	18"
EFU16	17⅜"	5'-9¼"	7'-4"	12"	26"
EFU18	19⅞"	5'-6¾"	7'-4"	14"	26"

Installing

To erect the CLAY Electric fan unit, place cabinet so that legs are level on floor with front side of cabinet flat against inside wall. Cut hole in wall and build wood frame as shown above for insertion of steel neck in front of fan. Nail neck inside wood frame securely. Fasten automatic shutter to outside of wood frame, with shutters running horizontally. If floor is uneven, cut holes in floor or cut off small length of legs to make cabinet level. The thermostat is wired up before cabinet leaves factory. Two wires lead out of cabinet just above Mercoid. Connect these to light wires through a snap switch. Mercoid control can be set to stop the fan on falling temperature of anywhere between 38 degrees and 60 degrees with about a 2 degree variation. (We recommend setting dial at 38 degrees in winter and 60 degrees in summer.) Complete disconnection is made through snap switch. Automatic shutter furnished with unit, placed on outside wall, opens when fan starts and closes when fan stops.


SNAP SWITCH
COOLING DOOR
MERCOID
INSTALLATION AND OPERATING INSTRUCTIONS
Ⓒ
DAMPER AND COOLING DOOR CONTROL
Ⓔ
LEG
18"
LEG
FLOOR

Specifications

CABINET: Constructed of 24 gauge copper bearing galvanized steel. All corners, legs, top and bottom edges 1"x1"x$\frac{3}{16}$" angle iron. Neck for fastening to wood frame, 20 gauge copper bearing galvanized steel, securely riveted to cabinet around fan ring.

FAN: 12"—16"—18" diameters. Self contained propeller type. 40 degree motors enclosed to protect windings. Securely fastened in cabinets by bolts through $\frac{3}{16}$"x1" bar steel (see page 42V).

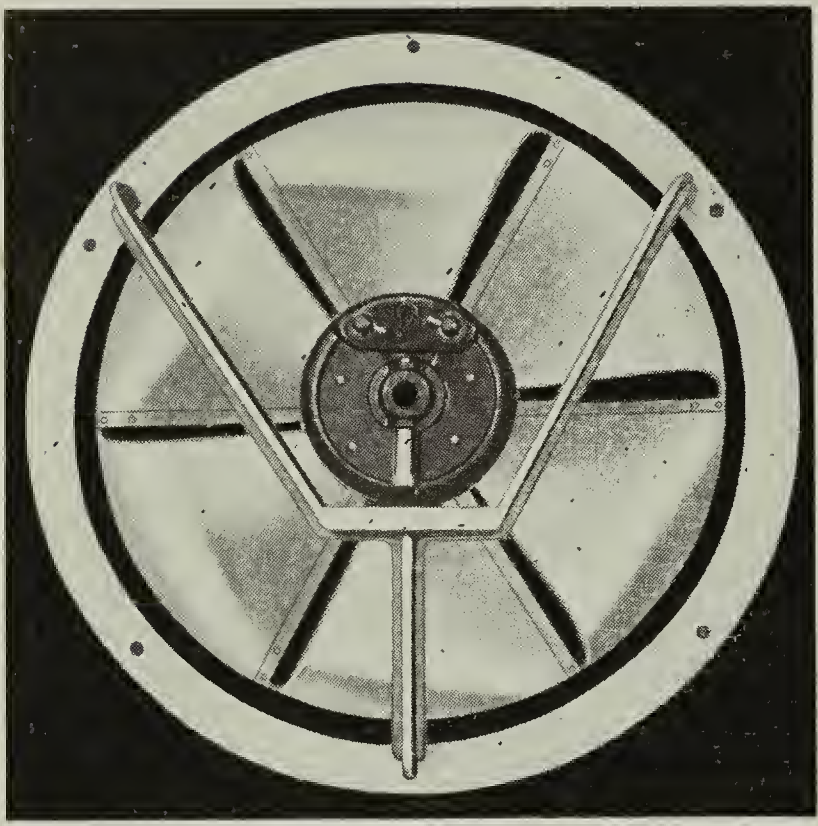
STORM HOOD: Heavy galvanized steel hood to break counteracting wind forces.

SHUTTER: Aluminum vanes in cast frame. Vanes interlock, sealing more securely as wind pressure increases. Interlocking vanes prevent noisy flapping.

THERMOSTAT: Mercoid control makes circuit on rising temperature and breaks current on falling temperature. Secured to side of cabinet and wired to motor at factory. Control box has metal cover with thermometer on face.

FINISH: Cabinet finished in grey baked enamel of highest grade.

Fans—Shutters



Exhaust Fans

Exhaust fans of the same type as used in the complete cabinet shown on page 40V can be furnished separately in the sizes and current characteristics listed below. We list the following advantages for consideration where fans only are desired.

A. The generous width of the flange or outer ring of the fan gives plenty of room for bolt holes in both the flange and the fan board. When, upon installation, the fan is bolted to the fan board, sufficient space is provided to give room for bolt holes. This is not true with fans of the narrow frame type.

B. MOTOR: Forty degree motors used throughout, enclosed at front end to prevent dirt, grease, steam or acid fumes from reaching windings.

C. WHEEL: The hub of the wheel is bored and reamed to size. Spider arms and outer retaining ring are of the best half hard cold rolled wire, giving maximum durability. Blades are of extra heavy sheet steel.

D. REMOVAL OF WHEEL: When fan is installed, the spread of the upper arms of the frame makes possible the removal of the wheel without tearing down the whole installation, a feature particularly desirable.

F. INTERCHANGEABILITY: Motors are interchangeable, making necessary the use of only one frame for D. C. or A. C. current in any phase.

Direct Connected Exhaust Fans

When ordering exhaust fans, be sure to specify whether alternating current or direct current, single phase or multiphase, number of cycles and voltage.

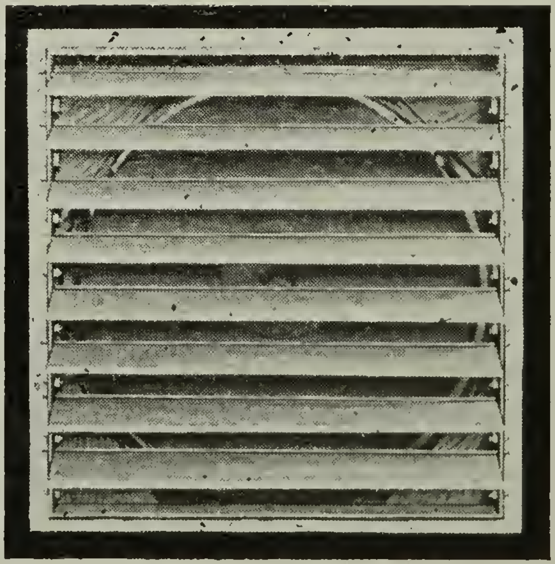
Order Reference Number	Diameter of Fan	Air Delivered Per Minute in Cu. Ft.	Approx. Revolutions Per Minute	Approx. Shipping Weight
JFB12 Exhaust Fan	12″	600 or 900	1070 or 1725	65 lbs.
JFB16 Exhaust Fan	16″	1500	1125	70 lbs.
JFB18 Exhaust Fan	18″	2420	1150	90 lbs.
JFB20 Exhaust Fan	20″	3300	1150	100 lbs.
JFB24 Exhaust Fan	24″	4300	860	125 lbs.

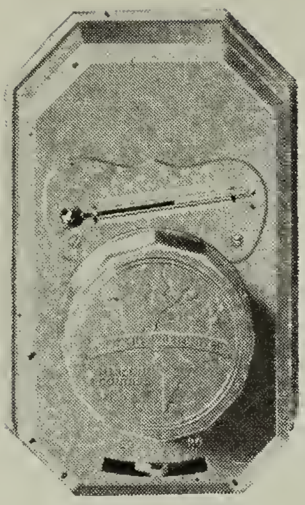
NOTE: 12″ and 16″ diameter fans can not be furnished in A. C.—2 and 3 phase—60 cycle current.

Automatic Shutters

Fans discharging through an outside wall make advisable the placing of an automatic shutter over the opening to prevent wind, rain or snow blowing in when fan is not running. Shutters made of very durable material, vanes nicely balanced and open easily when fan is in operation. When fan is not running, vanes close and interlock to prevent any rattling.

AS12—Automatic shutter for 12″ fan, ship. wt. 6 lbs.
AS16—Automatic shutter for 16″ fan, ship. wt. 18 lbs.
AS18—Automatic shutter for 18″ fan, ship. wt. 25 lbs.
AS20—Automatic shutter for 20″ fan, ship. wt. 34 lbs.
AS24—Automatic shutter for 24″ fan, ship. wt. 46 lbs.





Mercoid Thermostat

Where it is desired to automatically control an exhaust fan, stopping and starting it as temperature drops or rises in a room, we offer the Mercoid Thermostat for use in connection with any of the fans listed on page 42V. The Mercoid switch consists of a glass tube in which are sealed leads of special material. A quantity of mercury makes or breaks the circuit when the tube is tilted. There is no oxidization or corrosion. The contact is permanently clean and instantaneous in operation.

SC22 Thermostat—single circuit (For single phase AC or DC).

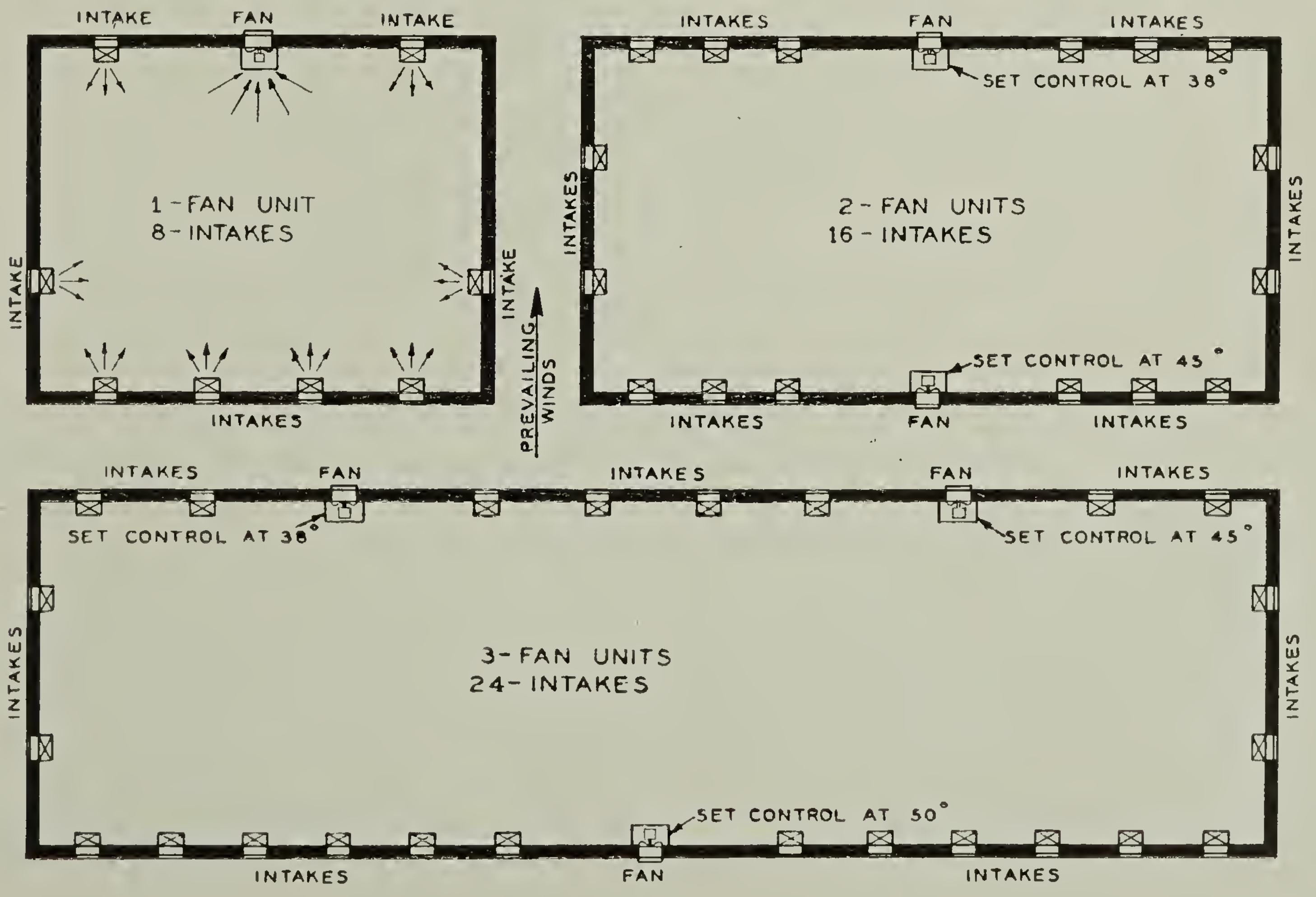
DP32 Thermostat — double pole (For 3 phase, Alternating current).

Estimating Electric Ventilation

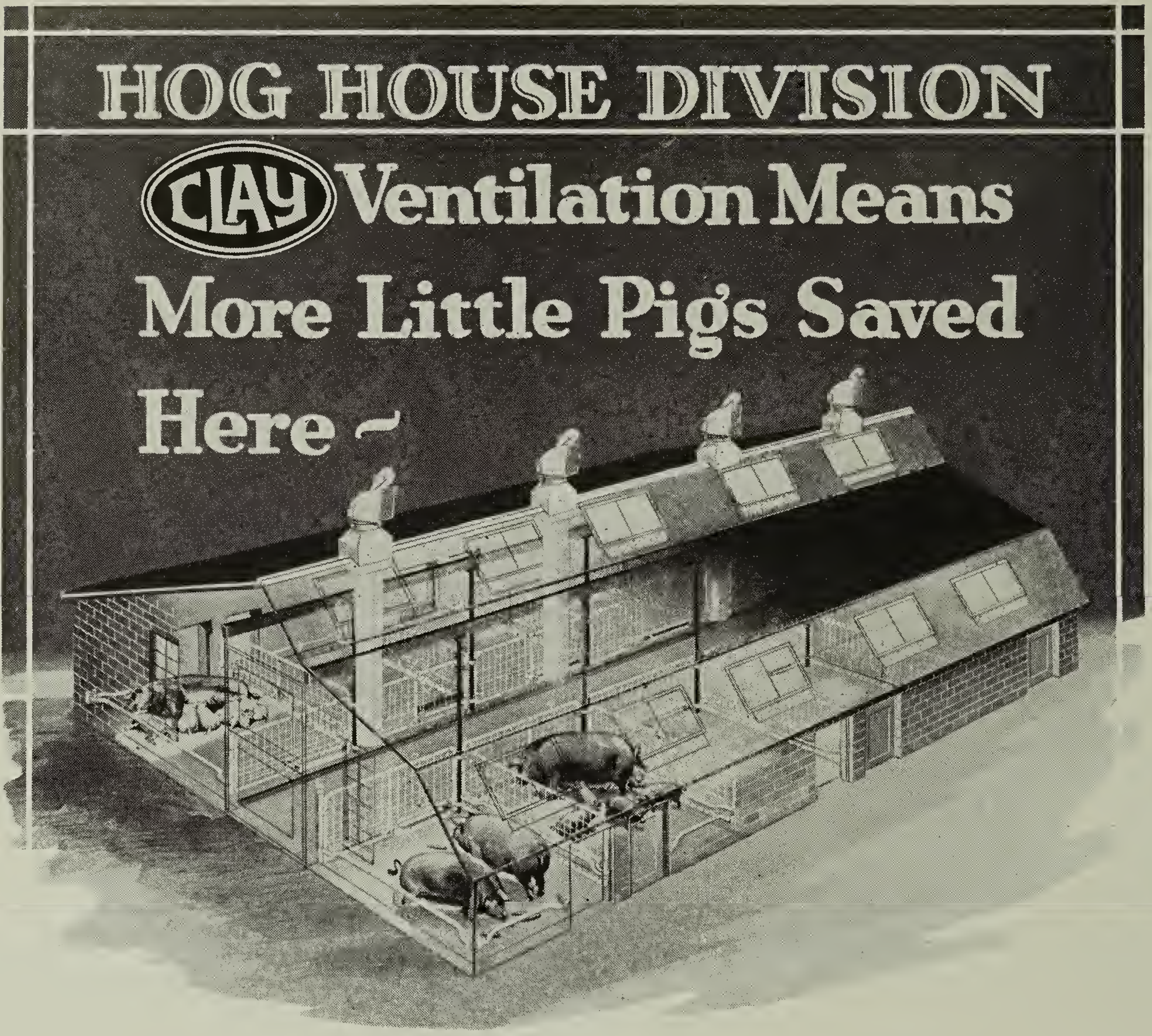
For the proper ventilation of a barn, one **EFU16** or two **EFU12** electric fan cabinets, (See page 40V) and eight **IT4-22B** CLAY Intake Regulators (See page 22V) should be used for each 12,500 cubic feet of stable area, (or fraction thereof). Thus the following table is used:

Stable area in Cu. Ft.	No. of **EFU16** Cabinets	No. of **IT4-22B** Intakes
Up to 12,500	1	8
12,500 to 25,000	2	16
25,000 to 37,500	3	24

The fan unit should be placed as near the center of the longest wall as possible. See sketches below for proper arrangements where 1, 2 or 3 cabinets are used.



NOTE - DO NOT LOCATE ANY INTAKE CLOSER THAN TEN FEET FROM EXHAUST FAN. SPACE BALANCE OF INTAKES EQUALLY ALONG ALL WALLS IN NUMBER ARRANGEMENT SHOWN



Clay Ventilation Pays Its Own Way

If hogs are worth raising, little pigs are worth saving! A source of great loss in hog raising is traceable to the number of little pigs lost from each litter. There are a number of causes for this, most important among them being wet, foul air, wet bedding and dripping walls and ceilings. A CLAY Ventilating System in your hog house will go a long way toward eliminating those costly losses of little pigs. A CLAY Ventilating System will supply an even, constant supply of pure fresh air, through automatically controlled intake regulators, drawing the foul damp air out through the foul air flues.

Leading the Way to Hog House Sanitation

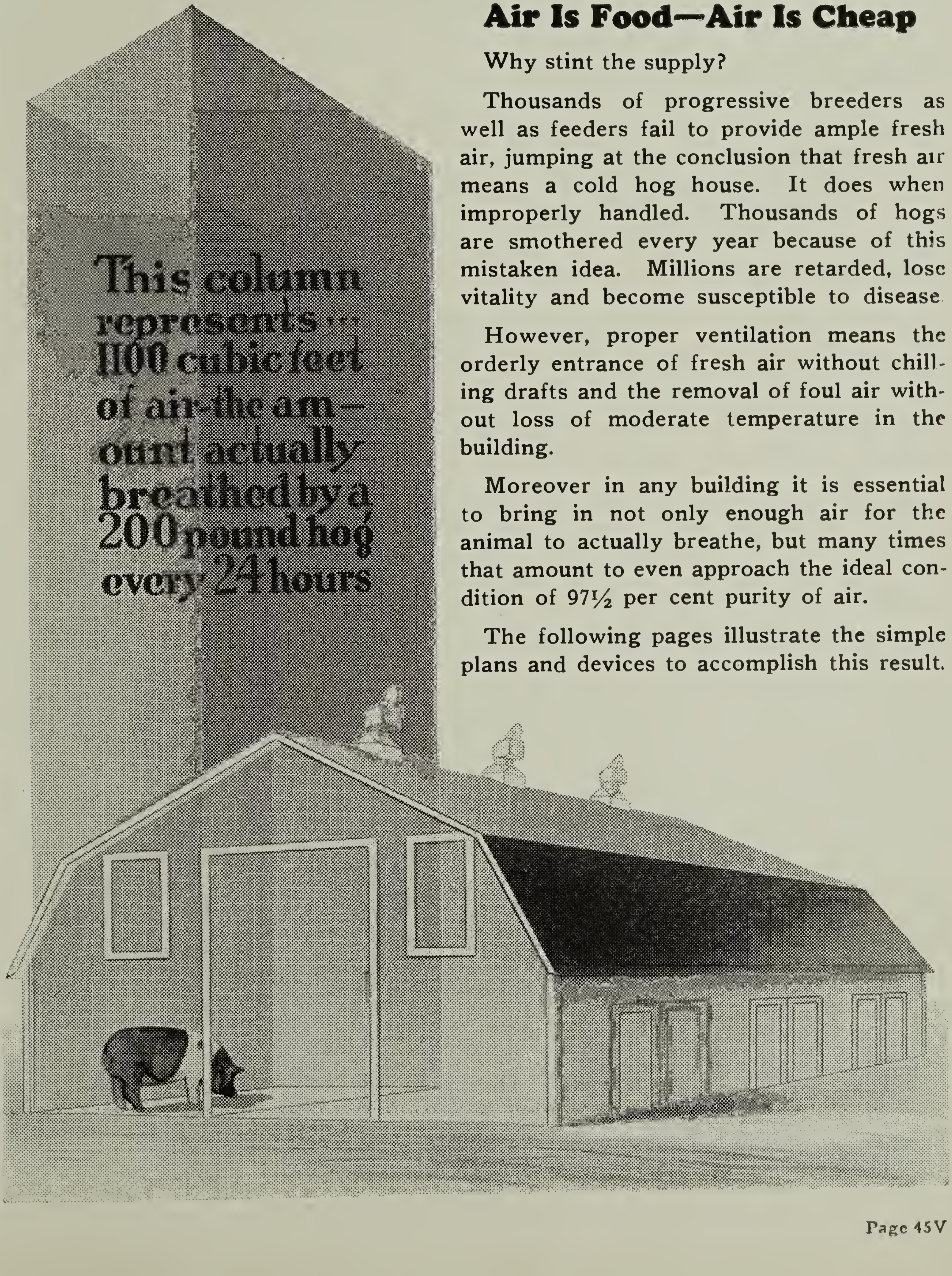
The CLAY Equipment Corporation leads the field in research work done and equipment furnished for modern sanitary hog houses. The CLAY Ventilating System is endorsed by an enthusiastic host of satisfied users.

CLAY EQUIPMENT CORP., Cedar Falls, Iowa

8000 Gallons of Air per Day for Each Hog

THIS is the amount taken in and exhaled every 24 hours by a 200 pound hog Many fail to realize the tremendous volume of fresh air required to keep a hog in good health. Look at the column at the left. It will give you some idea of this volume. Compare it to the feed and water you supply. The illustration is not exagerated.

Multiply this column by the number of animals in your hog house.


This column represents... 1100 cubic feet of air-the amount actually breathed by a 200 pound hog every 24 hours

Air Is Food—Air Is Cheap

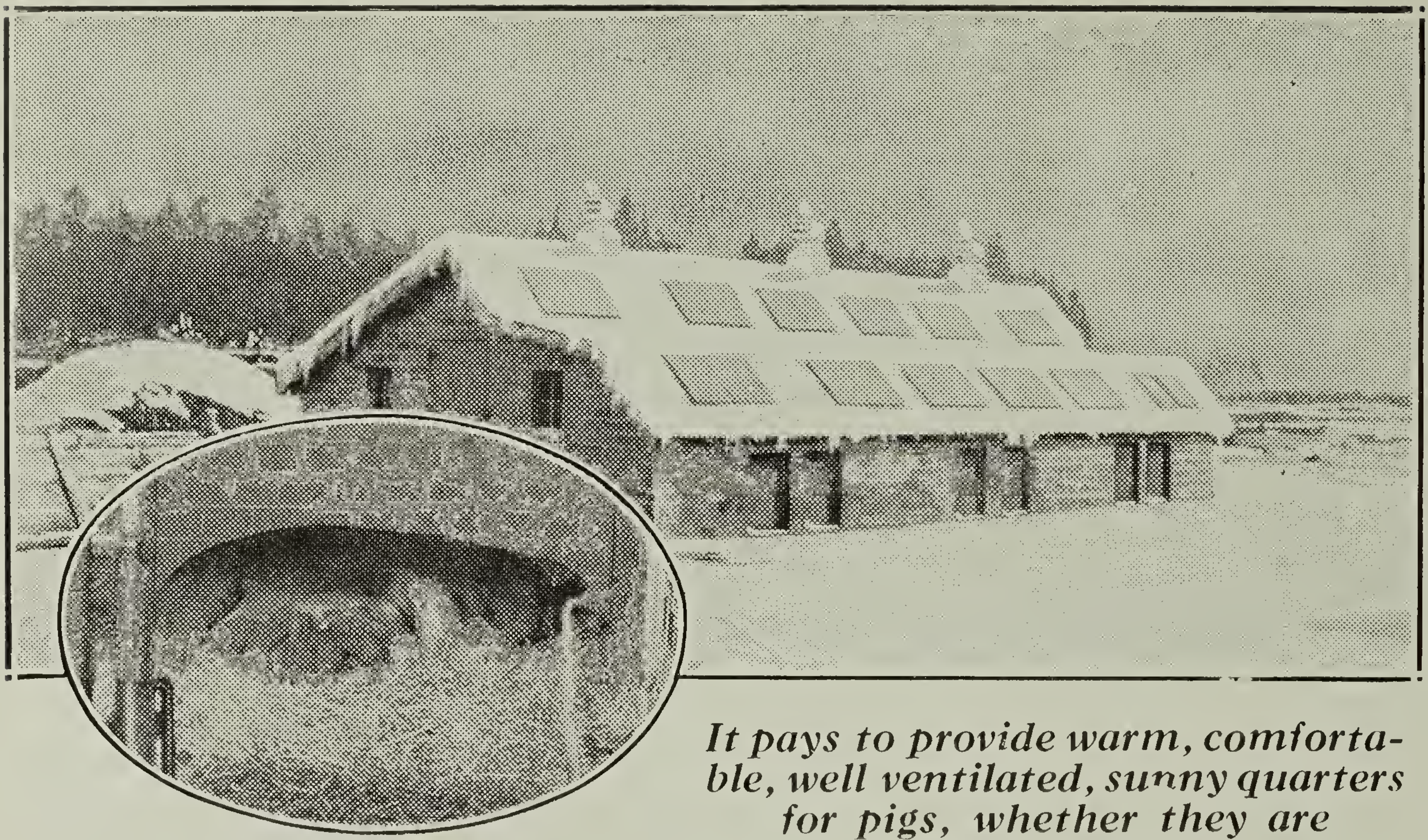
Why stint the supply?

Thousands of progressive breeders as well as feeders fail to provide ample fresh air, jumping at the conclusion that fresh air means a cold hog house. It does when improperly handled. Thousands of hogs are smothered every year because of this mistaken idea. Millions are retarded, lose vitality and become susceptible to disease

However, proper ventilation means the orderly entrance of fresh air without chilling drafts and the removal of foul air without loss of moderate temperature in the building.

Moreover in any building it is essential to bring in not only enough air for the animal to actually breathe, but many times that amount to even approach the ideal condition of 97½ per cent purity of air.

The following pages illustrate the simple plans and devices to accomplish this result.



It pays to provide warm, comfortable, well ventilated, sunny quarters for pigs, whether they are young or mature.

Don't Smother Your Hogs

AIR, water and food are the three great essentials of life, but of the three ai must surely be considered of greatest importance. Food is fuel to keep the body engine running, but to burn that fuel oxygen from the air is necessary

You could not burn wood in the kitchen stove without air (oxygen), so too, the hog cannot digest the food eaten unless oxygen is amply supplied.

When you burn wood in the stove you get heat, smoke and ashes. You must remove the smoke and ashes (the waste), always adding oxygen to keep the fire burning.

In the same way the hog when breathing oxygen produces energy—builds body tissues and throws off waste.

Fresh air plays a mighty important part in helping the blood in its course of circulation to unload carbonic acid gases and other wastes. Oxygen purifies the blood and keeps the various organs functioning properly. The blood must be frequently and thoroughly purified and nothing in the world but oxygen will do it.

Only a continuous flow of fresh air into the hog house and a continuous withdrawal of the foul, germ-laden air will put your hog house on a profitable pork-production basis.

Give your hogs the chance to grow and develop by providing them with God-Given clean air.

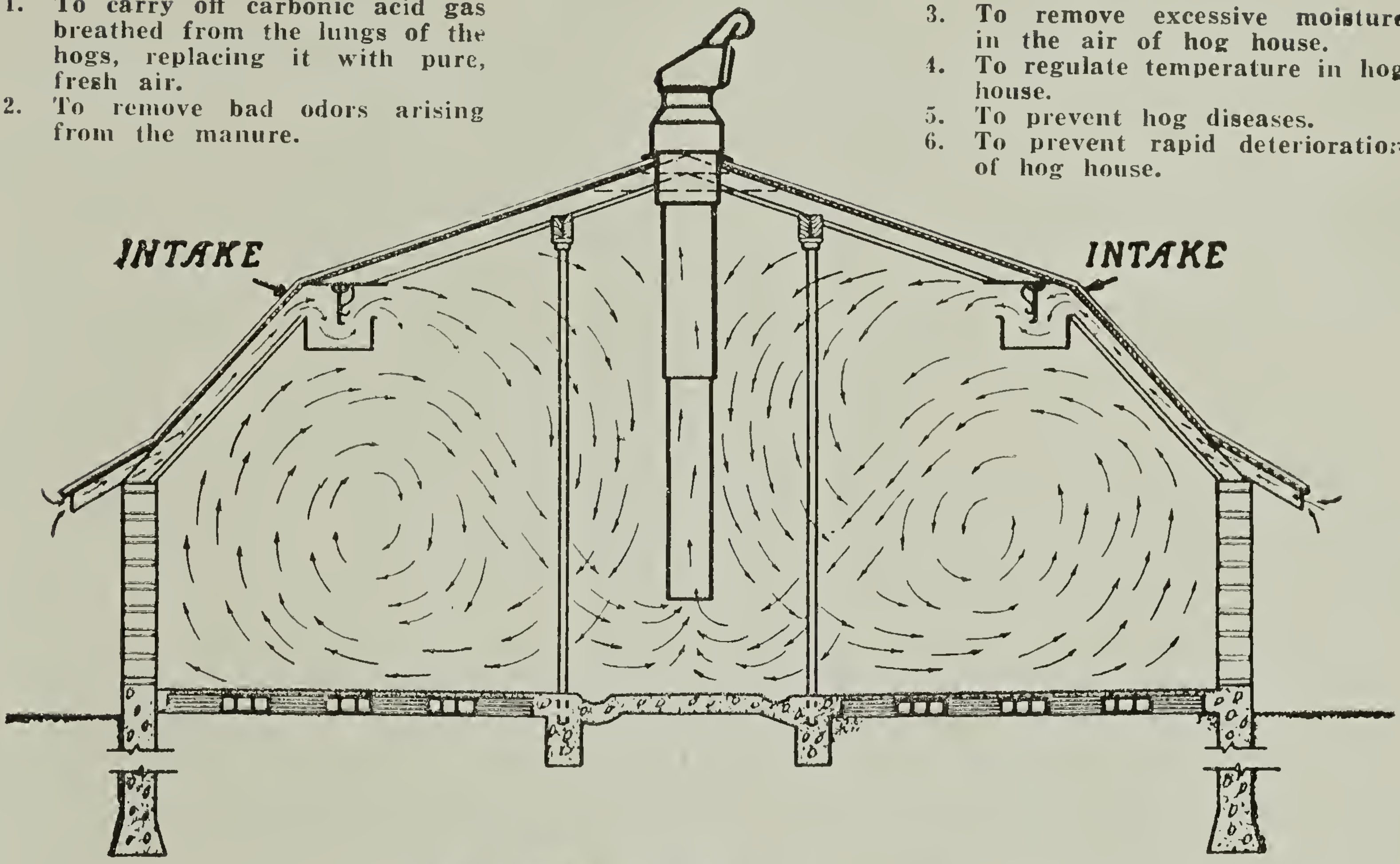
Start Little Pigs Right

The newly farrowed pig demands protection. A dry floor, warm shelter and clean air are necessary if best returns in health and profit are to be counted upon. To keep little pigs in damp, musty quarters and expect healthy, vigorous hogs is not logical. A dripping of condensed moisture from the roof and from frosty walls is seriously objectionable. Indeed, pigs compelled to shiver from cold and dampness burn up feed, which would otherwise build body tissue.

Ventilation provides orderly air circulation, pure fresh air without chilling drafts.

Ventilate Your Hog House

1. To carry off carbonic acid gas breathed from the lungs of the hogs, replacing it with pure, fresh air.
2. To remove bad odors arising from the manure.
3. To remove excessive moisture in the air of hog house.
4. To regulate temperature in hog house.
5. To prevent hog diseases.
6. To prevent rapid deterioration of hog house.



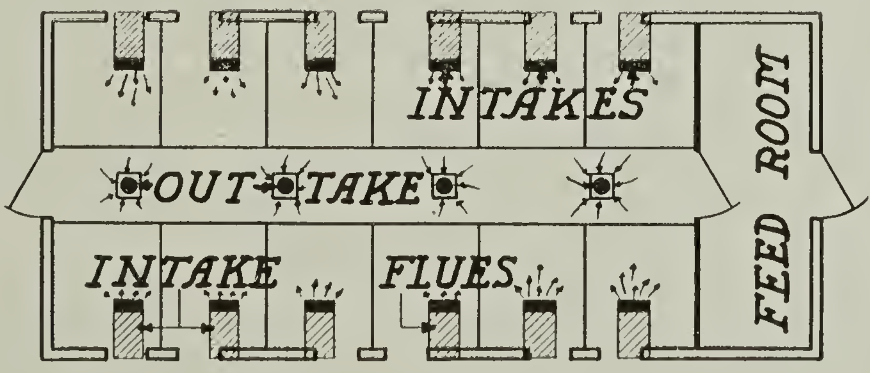
A Hog May Live:

3 Weeks Without Food **3 Days Without Water**

3 Minutes Without Air

In the illustration above the lower section of foul air flues slide up inside upper half when not needed, or may be unhinged and swung clear to one side and fastened to roof for summer season.

This is a typical ventilation plan of a twelve pen house. More detailed information will be found on page 53V showing arrangement of units in hog houses.



Ventilation, consisting of air regulators, roof ventilators and telescoping foul air flues. Can be quickly installed in any hog house.

For estimate on complete ventilation for any size house, see page 52V.

Prevention Better than Cure

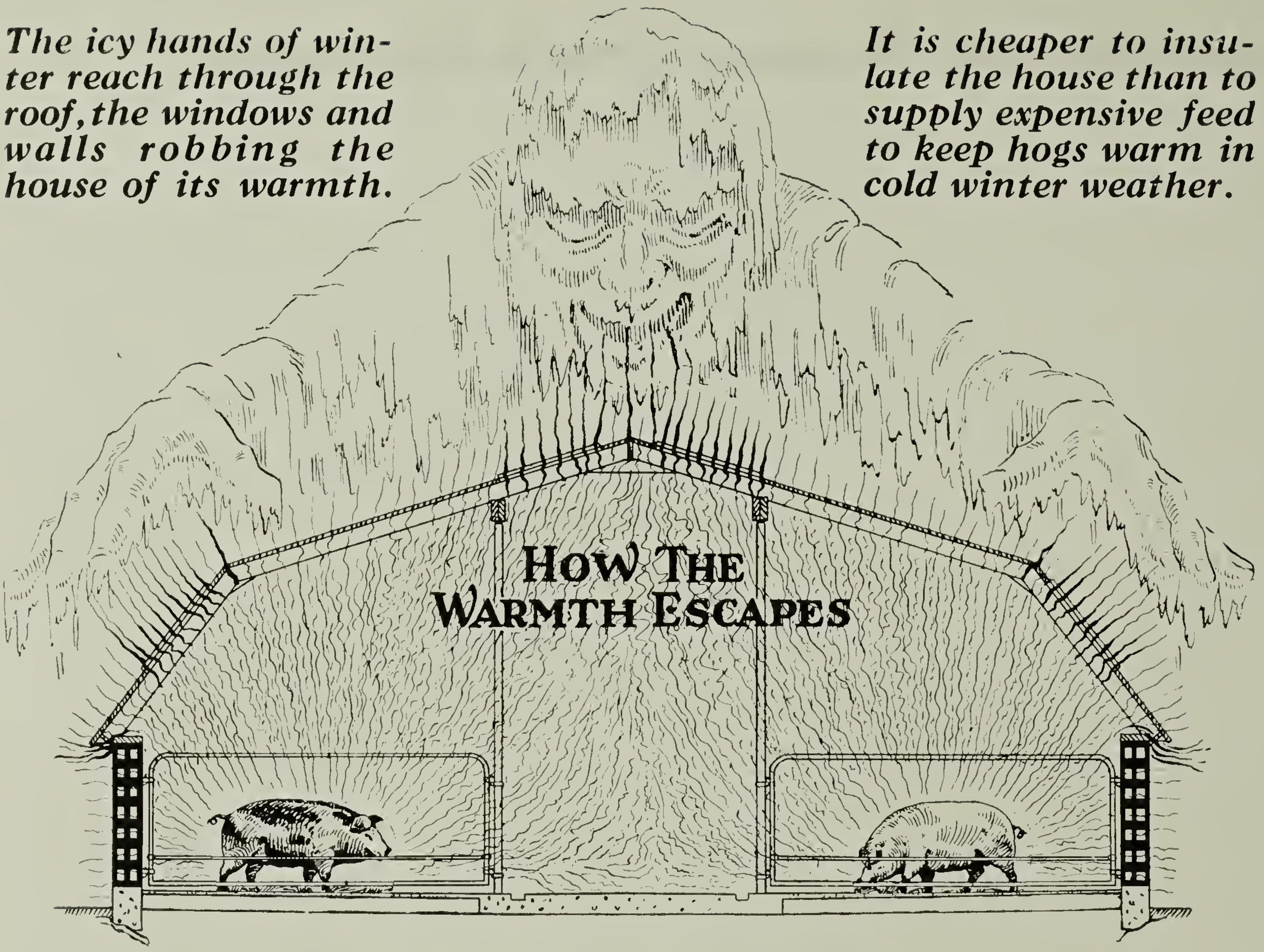
A hog can not maintain health and vigor, and develop properly unless provided with a great volume of pure, fresh air without harmful drafts. A hog needs pure air to properly digest and assimilate his food.

Feeding your hogs foul, polluted air is detrimental to their health and lives as is the feeding of foul, spoiled grain. The effect not being immediate is none the less dangerous. Remember, when once the slimy tentacles of disease fasten themselves upon your hogs it is a bitter task to pry them loose.

A hog lives in a world six inches high. It eats, breathes and sleeps close to the ground where filth and disease germs usually harbor.

The icy hands of winter reach through the roof, the windows and walls robbing the house of its warmth.

It is cheaper to insulate the house than to supply expensive feed to keep hogs warm in cold winter weather.



Insulate to Hold Warmth

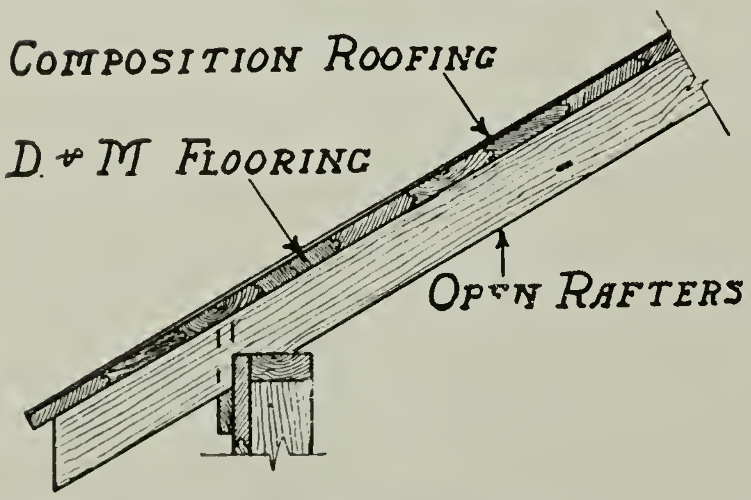
UNLESS there is an effective barrier (insulation) between the warm air inside the hog house and the frosty winter air outdoors, the animal warmth escapes, leaving the house cold, chilly and water-laden.

The cold air swallows up the heat as fast as it radiates out through the roof and through the walls.

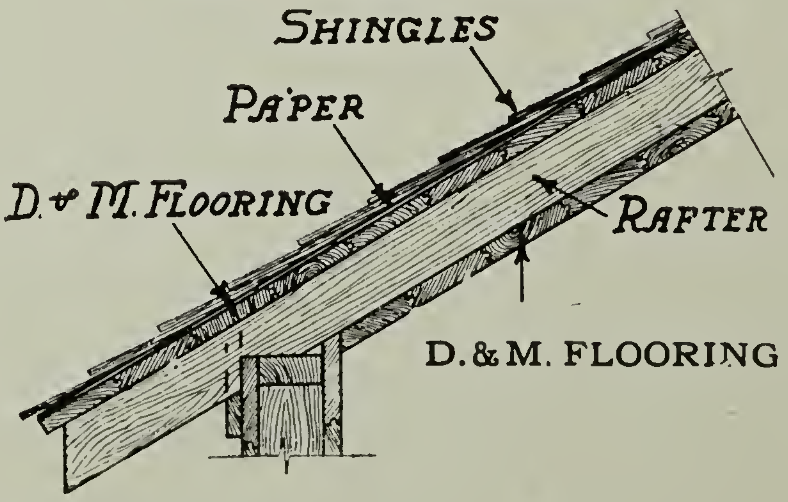
Remember this about a cold house: The delicately balanced body function will maintain normal body temperature at all costs. Body tissue burned to maintain normal temperature is terribly expensive.

Illustration above shows common avenues of heat loss. It is very evident that good insulation must be provided, in fact we can not assume the responsibility for successful results from ventilation equipment unless the roof and the walls are properly insulated to prevent unnecessary heat loss.

Building Not Insulated
50% Heat Loss



Building Insulated
23% Heat Loss



See page 16V for explanation of percent of heat loss.

What A Clay Ventilating System Will Do

TO be helpful, ventilation in the hog house must overcome two depressive conditions. These conditions are: DAMPNESS, and FOUL AIR. Where these conditions exist, disease germs will flourish.

Excessive dampness is the bane of hog-raising profits. It naturally lowers the vitality of the hog, renders the hog highly susceptible to pneumonia and other ailments, and cuts down his growth.

Cold drafts and foul air the same as dampness are equally disastrous to successful pig production.

If the air in the hog house is foul and though the house is comfortably warm, you cannot hope to have healthy hogs.

The CLAY Ventilating System for hog houses provides a comfortable temperature. Clean, pure air without harmful drafts over the little pigs.

Ventilating Removes Dampness

It is said on excellent authority that 100 hogs throw off from breathed air, their water-soaked bedding, together with moisture evaporation from their skin 55 gallons of water in 24 hours. Is it a wonder hog houses are usually damp cheerless interiors? The result is exactly like taking a sprinkling can and sprinkling 55 gallons of water on the floors, walls and ceiling of the house.

Unless means are provided to remove this excessive moisture, you are bound to have sickness and pig loss.

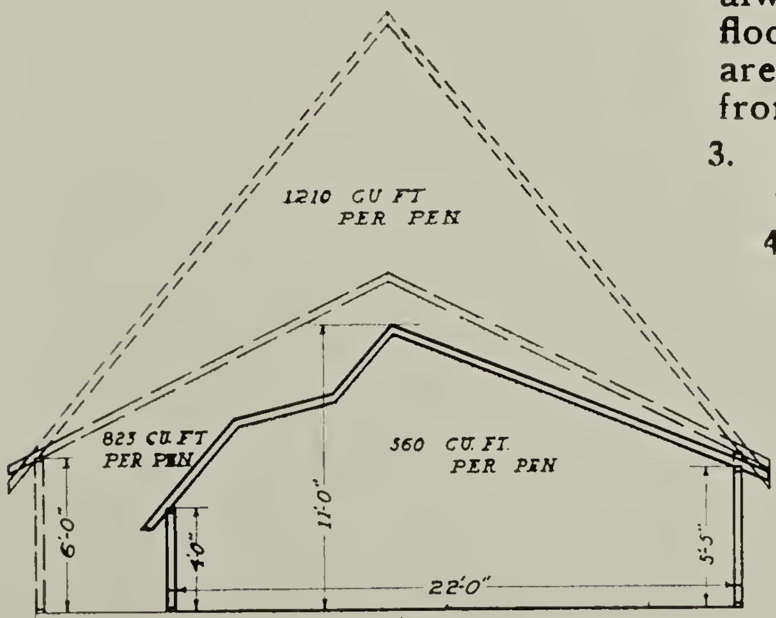
Dampness and frost on roof, walls and floor does not come from outside. It comes from the air inside which is overladen with moisture and thus contact with the cold roof and wall causes the air to give up this water vapor as frost and water.

Remove this heavy moisture laden air by ventilation. It is the only way to keep your hog house dry.

Build A Smaller House

The cross section below shows the advantages gained by building a smaller house.

1. The temperature in the CLAY House is uniformly warmer since its cubical content is less. You know that a 9 foot high kitchen is warmer than a 10 foot, or a 12 foot.

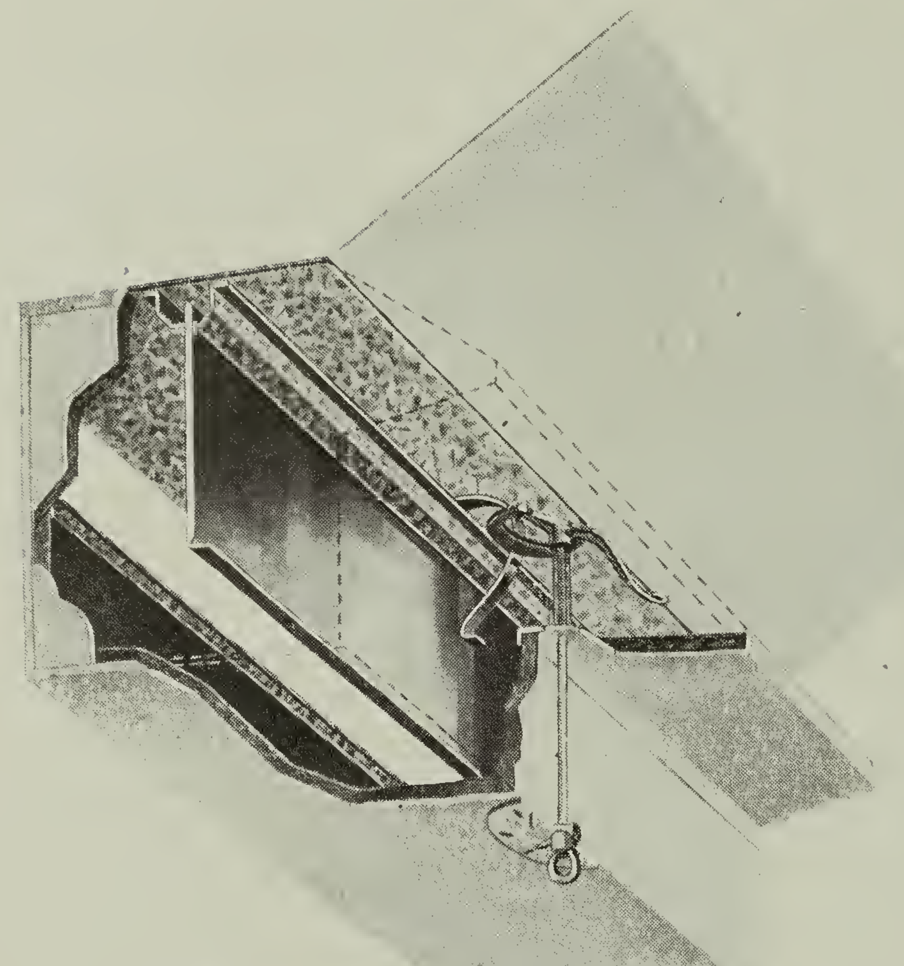


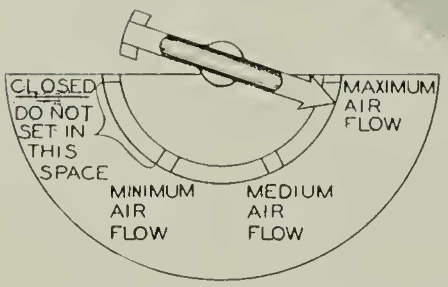
2. The roof is lower, thus the warm air which always rises to the top is kept closer to the floors where it is needed. The larger the roof area the greater chance for warmth to radiate from the house.
3. Windows on the roof are easily placed to do their greatest good.
4. A smaller house fully equipped which will earn extra profits costs no more than a larger house without these essentials.

Because CLAY Ventilation provides a continuous circulation of air through the house—and a continuous removal of foul air—the result is air conditions that promote health and vigor.

The smaller house permits proper ventilation without lowering the temperature.

Clay Automatic Fresh Air Intake Regulator





The CLAY Fresh Air Regulator is a highly important unit of the complete CLAY ventilating system. As the air comes through the regulator it spreads and gently drops to the floor. In so doing it expands and mixes with the warm air inside of the house. Through increased warmth and circulation the air gathers like a sponge the moisture which is in the hog house and together with foul air is drawn out through the ventilator head. The inside of this box is insulated to prevent the cold air passing thru it causing the outside of the box to condense moisture.

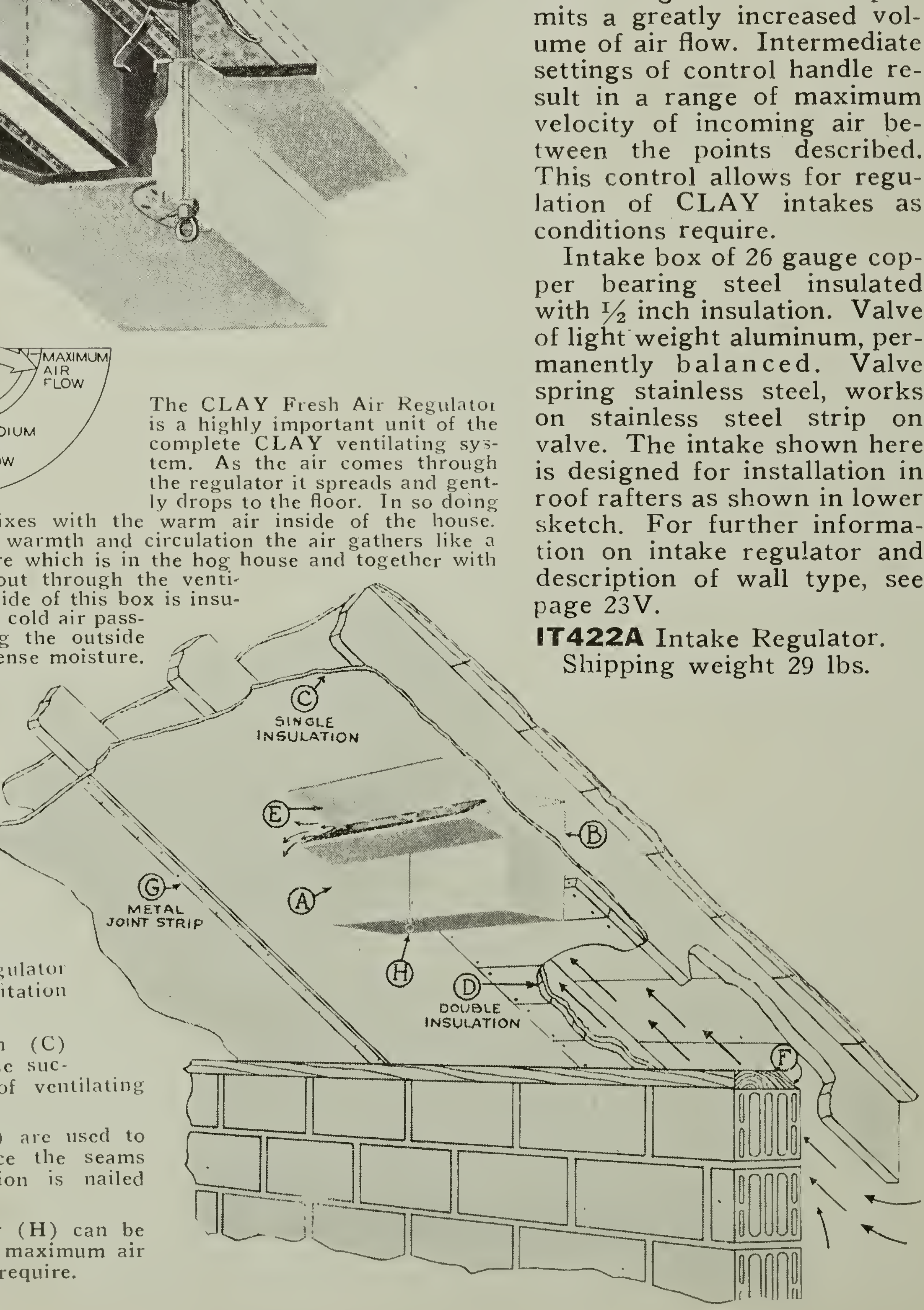
As shown in diagram at right, the fresh air enters the flue opening (F) under eaves. To secure fresh air passage corner of plate is cut full depth of rafter.

Double insulation (D) is necessary on under side of wood connecting flue from wall plate to intake regulator to prevent precipitation of moisture.

Single insulation (C) is necessary for the successful operation of ventilating system.

Metal strips (G) are used to cover and reinforce the seams where the insulation is nailed onto the rafters.

Control indicator (H) can be set to regulate the maximum air flow as conditions require.



Volume Control

The CLAY intake regulator automatically controls the maximum volume of air flow at any point desired. Note illustration at the left. With control indicator set at minimum air flow only a limited volume of air is permitted to enter, regardless of outside temperatures or wind velocities. At maximum air flow setting, increased spring resistance against the valve permits a greatly increased volume of air flow. Intermediate settings of control handle result in a range of maximum velocity of incoming air between the points described. This control allows for regulation of CLAY intakes as conditions require.

Intake box of 26 gauge copper bearing steel insulated with ½ inch insulation. Valve of light weight aluminum, permanently balanced. Valve spring stainless steel, works on stainless steel strip on valve. The intake shown here is designed for installation in roof rafters as shown in lower sketch. For further information on intake regulator and description of wall type, see page 23V.

IT422A Intake Regulator.
Shipping weight 29 lbs.

Clay Telescoping Out-take Flues

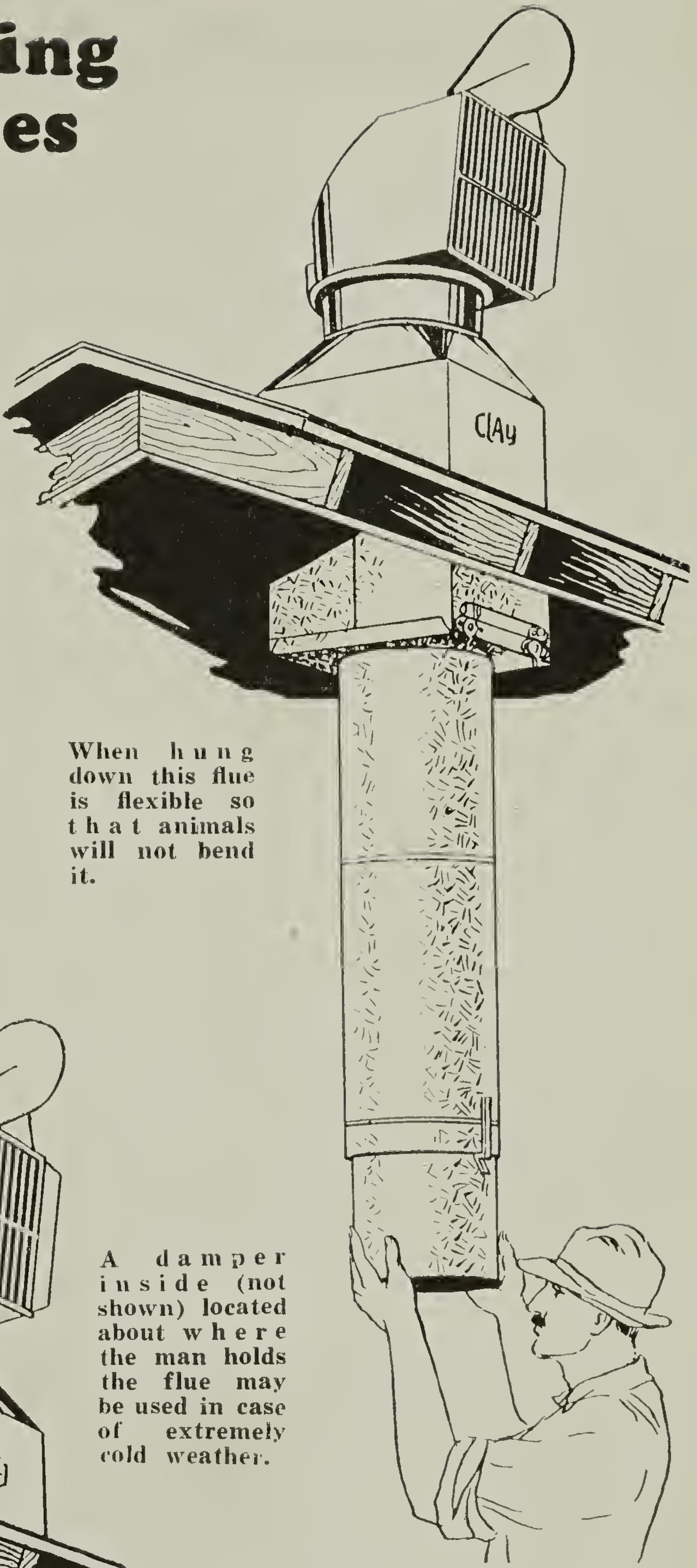
THE CLAY Out-take Flue shown here is scientifically constructed to meet the exact requirements of a hog house ventilating system. Its design is based solely upon gaining maximum efficiency, through removal of cold, damp, foul air from near the floor. Without these flues the warmer air near the roof is quickly sucked out.

To install, the sturdy galvanized metal box is removed from flue and nailed on inside of rafters. Always a tight fit which prevents heat loss and insures perfect operation of ventilating system.

The flue telescopes easily out of the way during working hours. Latch holds the telescoped section in raised position, providing ample head room in alley.

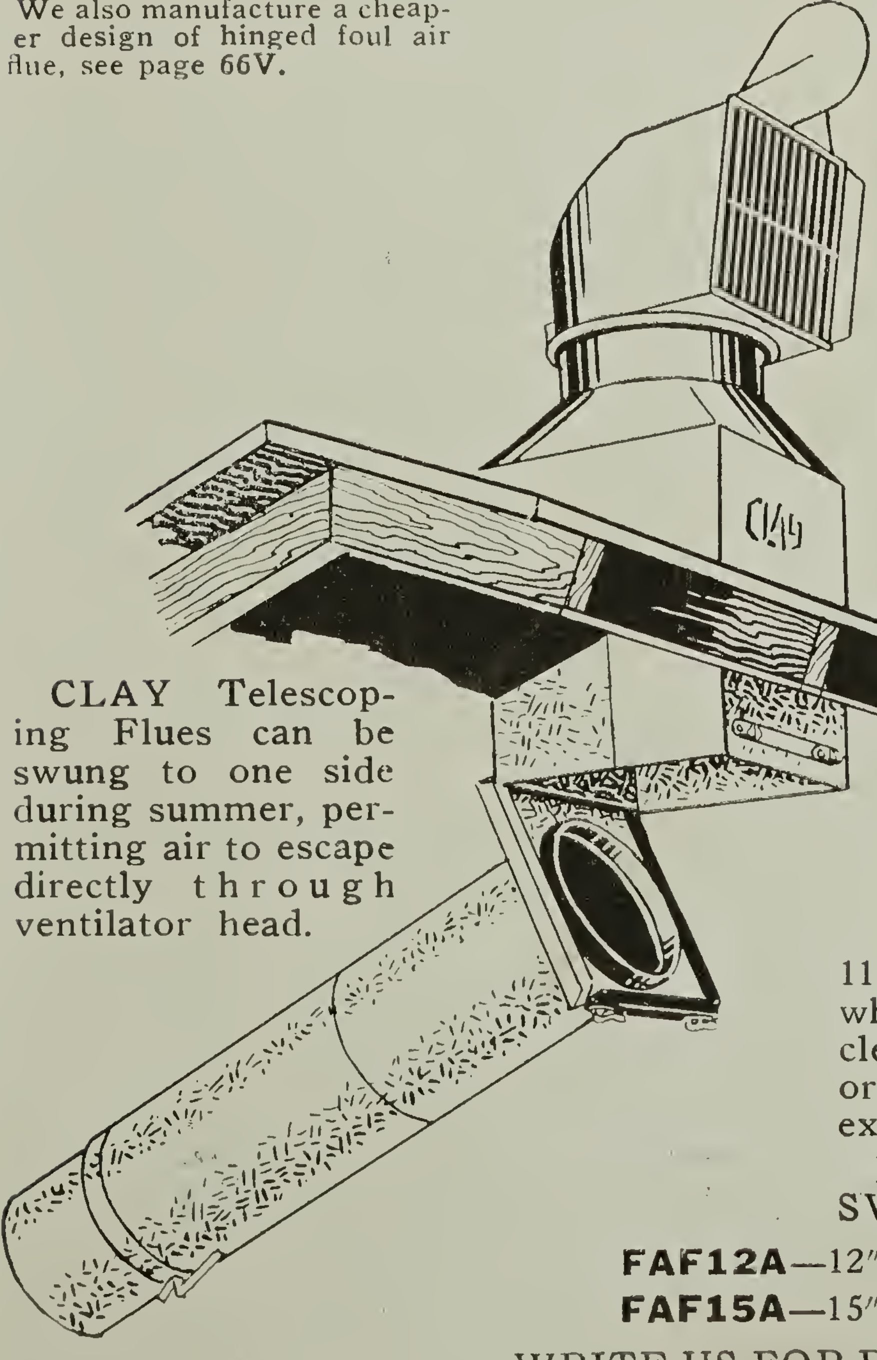
CLAY Out-take Flues are made of 26 gauge galvanized copper bearing steel. The square collar is 20 gauge to insure sufficient stiffness. The side of box 24 gauge.

We also manufacture a cheaper design of hinged foul air flue, see page 66V.



When hung down this flue is flexible so that animals will not bend it.

A damper inside (not shown) located about where the man holds the flue may be used in case of extremely cold weather.



CLAY Telescoping Flues can be swung to one side during summer, permitting air to escape directly through ventilator head.

The actual length of the foul air flue, round pipe, when extended is 7′7″. The box above is 1′2″, the total extended length 8′9″. When telescoped the length from the top of the box to bottom is 4′6″.

Thus when used on a ridge 11′ high it leaves 6′6″ head clearance when telescoped, and when down 2′3″ clearance above the floor. Flues 1′, 2′, or 3′ longer can be supplied at slight extra cost.

Flues fit Ventilators SV412, SV415, SV612, SH12, SH15.

FAF12A—12″ Telescoping Flue	62 lbs.
FAF15A—15″ Telescoping Flue	100 lbs.

WRITE US FOR PRICE LIST

Complete Clay Ventilating Systems

Units Required—Hog Houses Up to 22 Feet Wide

First determine the total square foot area of the hog room by multiplying inside width by inside length. Do not include feed or cooker rooms that are separated by tight partitions. After getting total floor area of rooms to be ventilated, find column in chart below which includes correct figure.

Number and Description of Units	Total Square Floor Area in Feet									
	Up to 250	251 to 450	451 to 700	701 to 900	901 to 1150	1151 to 1350	1351 to 1550	1551 to 1800	1801 to 2250	2251 to 2800
SV400 Ventilators No. Required	1	2	3	4	5	6	7	8	10	12
FAF—A Flues Number	1	2	3	4	5	6	7	8	10	12
IT422A Intakes Number	4	6	10	12	16	18	22	24	30	36

The above chart is based on furnishing the FAF-A style (see page 51V) foul air flues in houses where the distance from the floor to the ridge is 11 feet. If height of ridge is less than 11′ the FAF (see page 66V) style flue must be used. If more than 11 feet be sure to add one foot of FAF-A style flue for each foot over 11 feet in height.

If the house has a ceiling and loft add necessary number feet of insulation as shown on page 68V.

We wish to call attention to the fact that the FAF-A style flue not only has the telescoping features, allowing raising out of way during working hours, but, it is also flexible when extended so that hogs loose in the alley cannot injure it. In addition, the entire flue is hinged and can be hooked back on ceiling in summer.

The above chart indicates the use of the **IT4-22A** intake regulator as illustrated on page 50V. This style intake is used for installation between roof rafters as shown on page 55V. If side wall type of intake installation is required order **IT422B** intake regulator as shown on page 23V.

Hog Houses 24 Feet Wide or Wider

Where the hog house is 24′ wide or more, it is necessary to use 15″ flues and ventilators in the same quantity as shown in chart above for respective floor areas. Intakes same in number as shown in chart.

EXAMPLE: House 22 x 60 equals 1320 sq. ft. floor area and requires 6-12″ roof ventilators, 6-**FAF12A** flues and 18-**IT4-22A** intake regulators.

EXAMPLE: House 24 x 60 equals 1440 sq. ft. floor area and requires 7-15″ roof ventilators, 7-**FAF15A** flues and 22-**IT422A** intake regulators.

Roof Ventilators

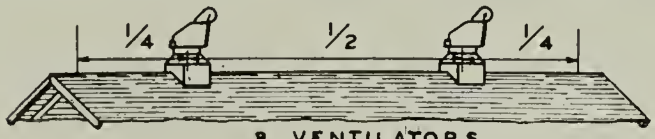
The above chart indicates the use of the **SV400** style ventilator as illustrated on top of page 56V. However, the **SV612** (page 56V) or the SH12 and **SH15** (page 57V) can be substituted at a lower price.

Clay Guarantee of Results

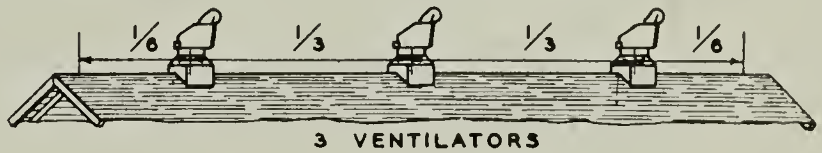
The CLAY Ventilating system is guaranteed to circulate 1342 cubic feet of air per hog per hour when the building is closed in cold weather and the system is installed and operated according to instructions furnished. It is further guaranteed that this circulation will remove the excessive moisture and that the room will contain no more than 3.3% of the air once breathed. The walls and ceiling will be free of moisture providing there is less than 7 degrees temperature difference between air of room and wall surface.

Spacing Ventilators—Hog House Roofs

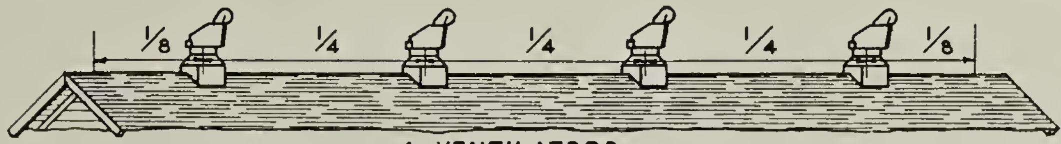
Ventilator heads should always be spaced evenly. By this is meant the space from the end of the roof to first ventilator head will be just one-half the distance between the ventilator heads. Starting with one unit, the head should be located central of the hog house length and the additional diagrams below show division of space for from two to six ventilator heads.



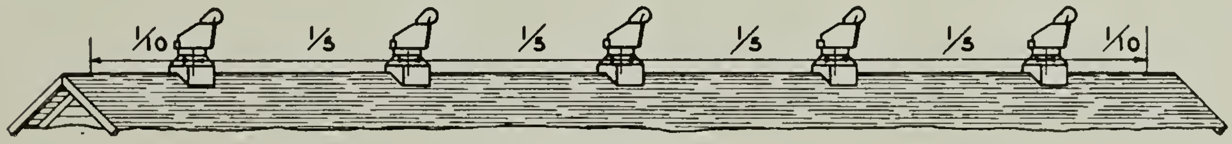
2 VENTILATORS



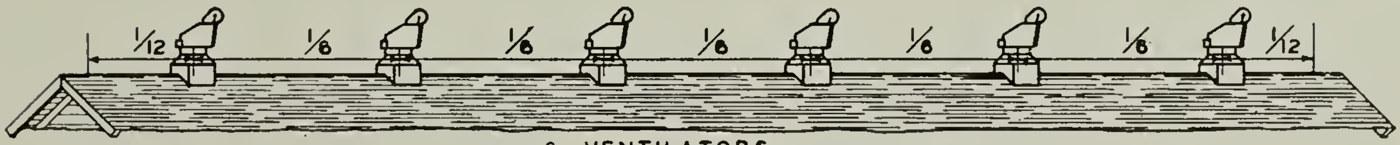
3 VENTILATORS



4 VENTILATORS



5 VENTILATORS



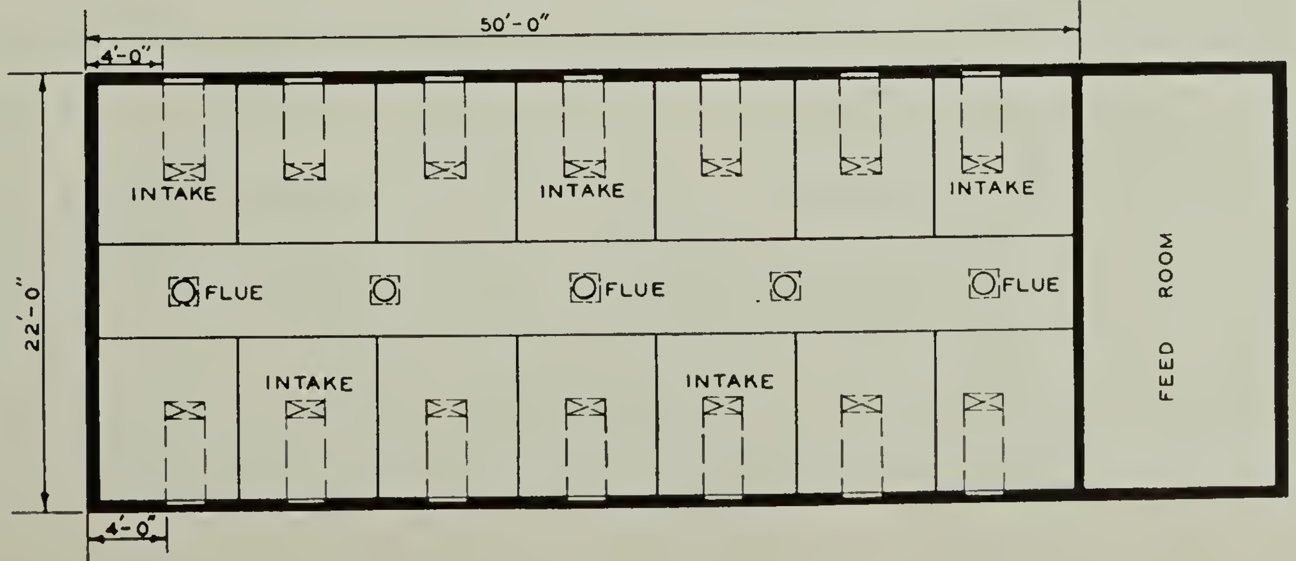
6 VENTILATORS

Spacing Intakes—Foul Air Flues

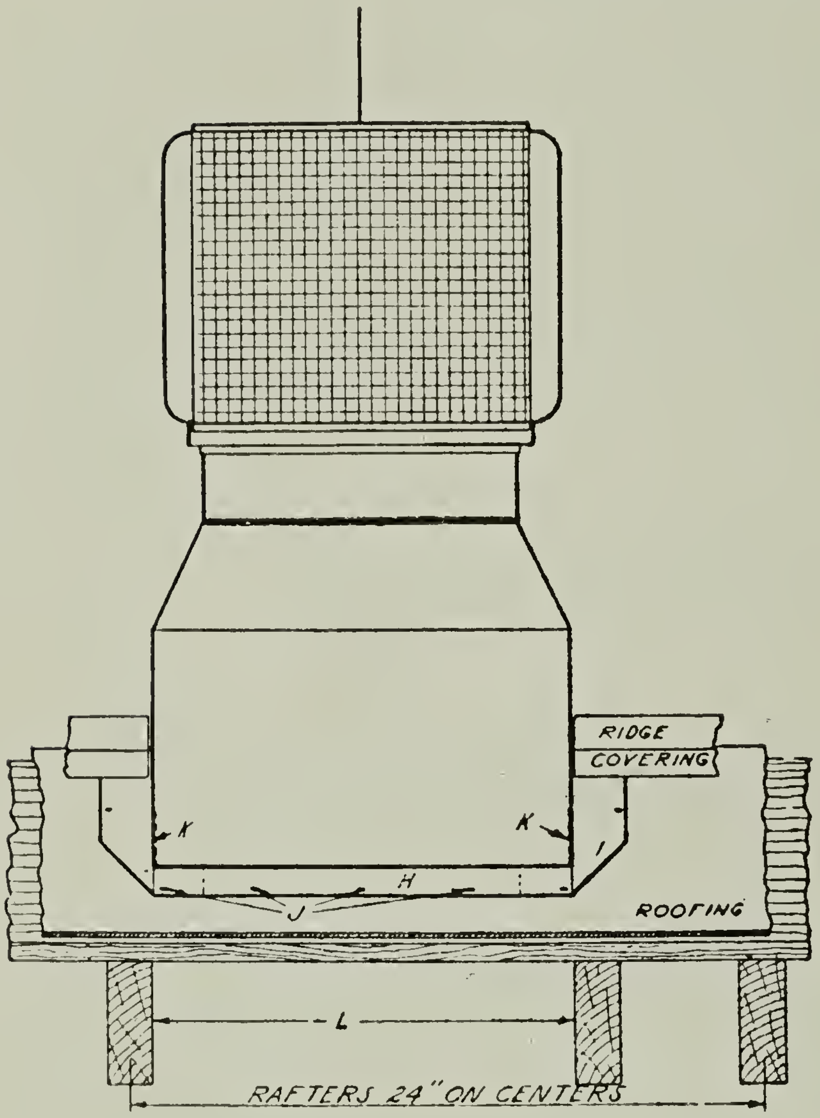
Place ½ of total intakes used on each side of house. Do not install any intakes closer than 4′ from end wall. Space balance of intakes equally between each end intake, or as nearly so as rafter space allows. In the typical installation shown below of a house 22′ x 50′ (exclusive of feed room) 14 intakes are required. It will be noted that some slight variation appears in the distance between intakes, but in most all cases the division of intakes allows for one to a pen and each intake should be located as near the center of pens as possible.

Roof Windows and Intakes

As the exterior appearance practically requires spacing roof windows evenly. This theoretical even spacing of intakes will have to be adjusted to bring intake ducts in roof area between roof window openings.



Erecting Clay Exhaust Head Ventilators



CLAY Hog House ventilators are built with flashings formed on two sides. First, on plain sides of ventilator base make a vertical slit, fold out on a line between top of slit and corner of base. Be sure this fold is at an angle that will fit pitch of roof. Trim off all but two inches of this flashing formed from base. Use small nails (J) through flashing near edge to hold ventilator in place. Where prepared roofing is used, use plenty of cement under flashing. Place ridge coverings after ventilators are set.

Vane is wired inside of ventilator on style SV612. Attach vane before putting head on base. We frankly advise removing screen for greatest ventilation results. See that ventilator turns easily before leaving it.

Hole through roofing should be 16″ square (Dim. L) for 12″ suction ventilator, with short stub rafters on one side of opening as indicated. For 15″ ventilator this hole should be 19″ square.

These erection instructions also apply on SV612, SV412, SV415 and SH12 and SH15 CLAY Ventilators.

Clay Telescoping Flexible Flues

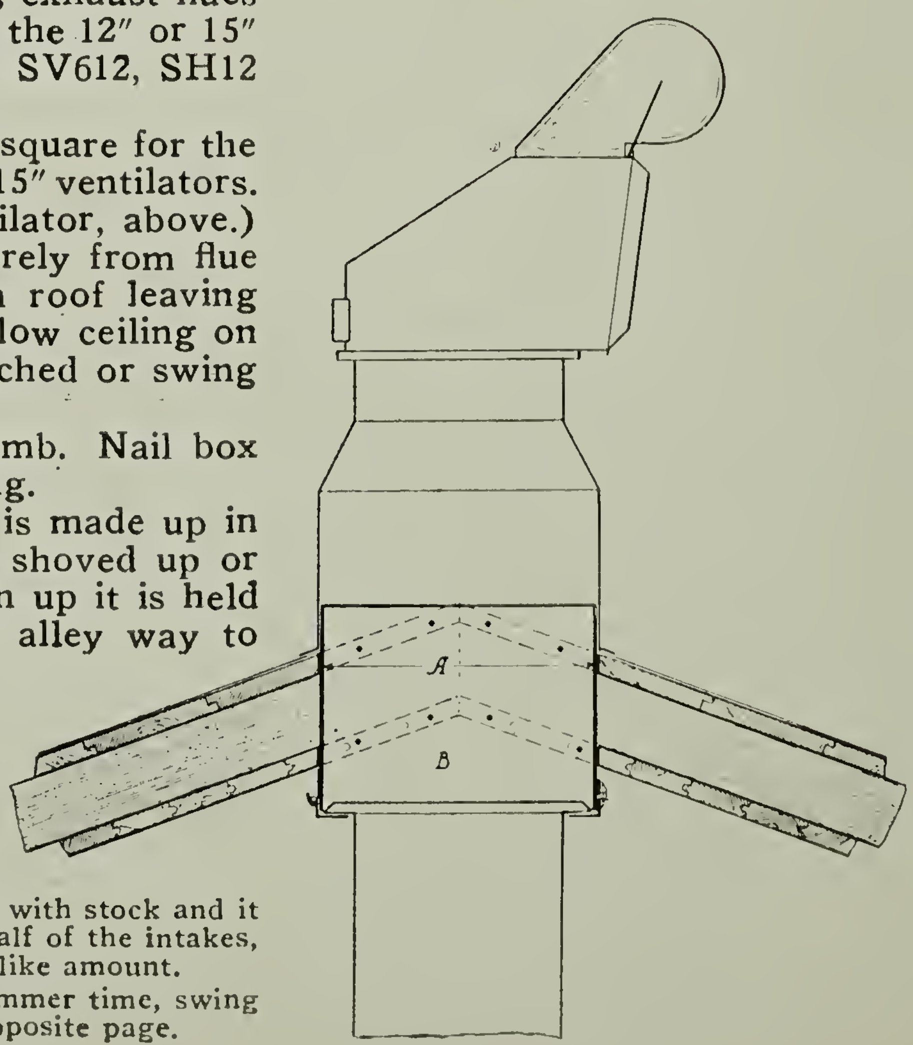
CLAY flexible, telescoping, all steel, exhaust flues are built to fit into the base of either the 12″ or 15″ square base ventilators Nos. SV412, SV612, SH12 and SV415 and SH15.

Dimensions (A) must be full 16″ square for the 12″ ventilators and 19″ square for the 15″ ventilators. (See installing instructions for ventilator, above.)

Box (B) should be removed entirely from flue at hinges. Place box in opening in roof leaving bottom of box not less than 2½″ below ceiling on hinge side so flue can be easily attached or swing open in warm weather.

Be sure to set box perfectly plumb. Nail box securely either to rafters or sheathing.

Next put flue in place. The flue is made up in two sections, the lower half can be shoved up or telescoped into upper half, and when up it is held by a latch, thereby permitting free alley way to work in.

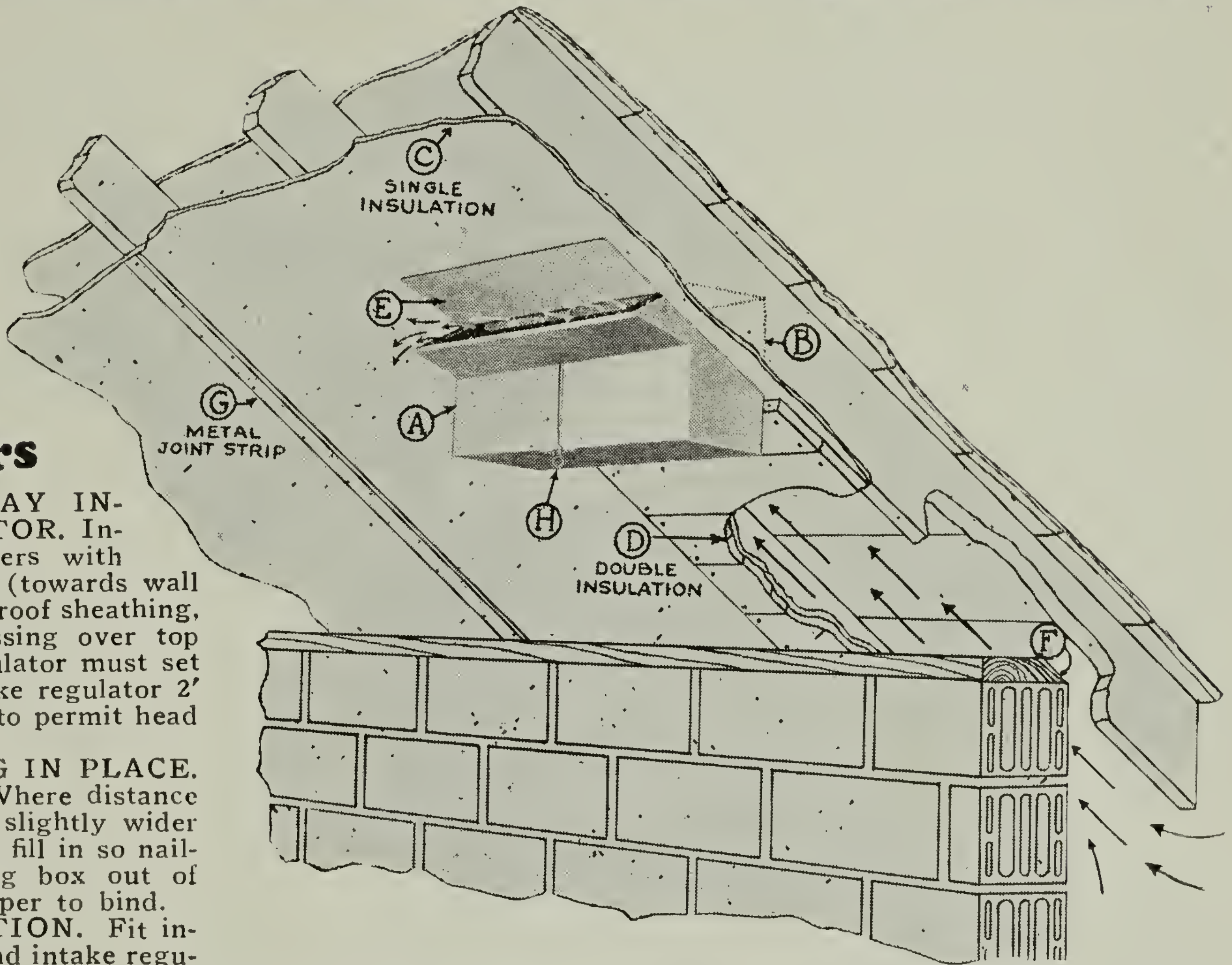


CAUTION: Do not release catch and let lower section drop, let it down easy to prevent damage.

A damper is placed in flue near lower end by which the ventilation can be controlled as desired. This damper should be regulated in connection with intake regulation. If building is only partially filled with stock and it is found desirable to close one-third or one-half of the intakes, see that each foul air flue damper is closed a like amount.

To permit free outlet for warm air in summer time, swing flue up under roof and fasten it there. See opposite page.

Installing and Operating System



Intake Regulators

(A) IT422A CLAY INTAKE REGULATOR. Install between rafters with top corner of box (towards wall side) tight against roof sheathing, preventing air passing over top of regulator. Regulator must set plumb. Place intake regulator 2′ to 3′ from wall or to permit head clearance.

(B) NAILING IN PLACE. Use small nails. Where distance between rafters is slightly wider than the box itself, fill in so nailing will not spring box out of shape causing damper to bind.

(C) INSULATION. Fit insulation tight around intake regulators as illustrated.

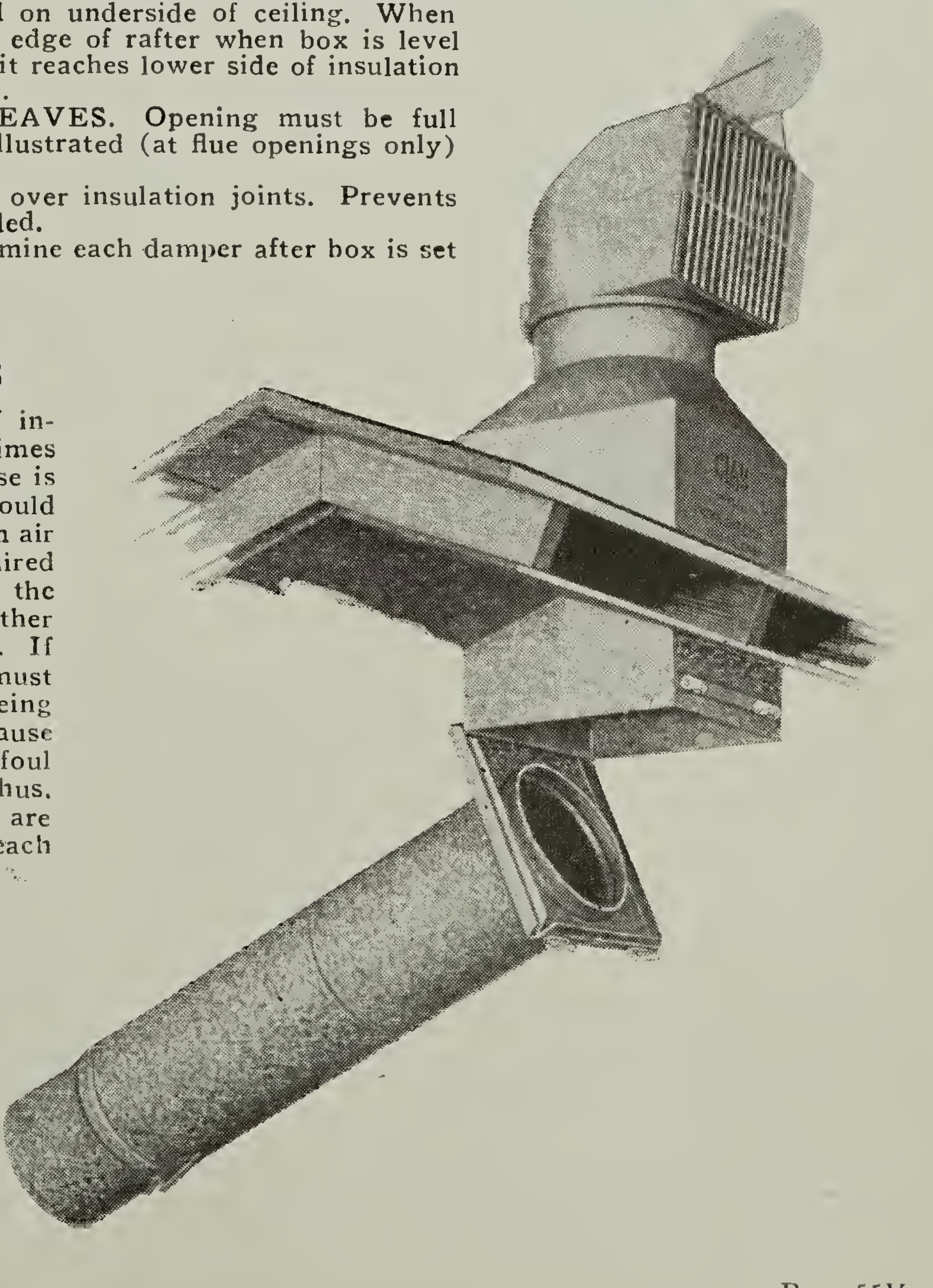
(D) FRESH AIR FLUE. Provide double insulation on underside of fresh air flue, from wall to intake regulators, preventing condensation and precipitation of moisture below.

(E) EXTENSION SHIELD. Nail on underside of ceiling. When top corner of box does not reach lower edge of rafter when box is level let extension shield extend out level till it reaches lower side of insulation and there nail to lower side of insulation.

(F) FLUE OPENING UNDER EAVES. Opening must be full depth of rafter—cut corner of plate as illustrated (at flue openings only) to secure free air passage.

(G) METAL STRIPS. Nail strips over insulation joints. Prevents insulation from breaking where it is nailed.

(H) ALUMINUM DAMPER. Examine each damper after box is set to be sure it swings freely.



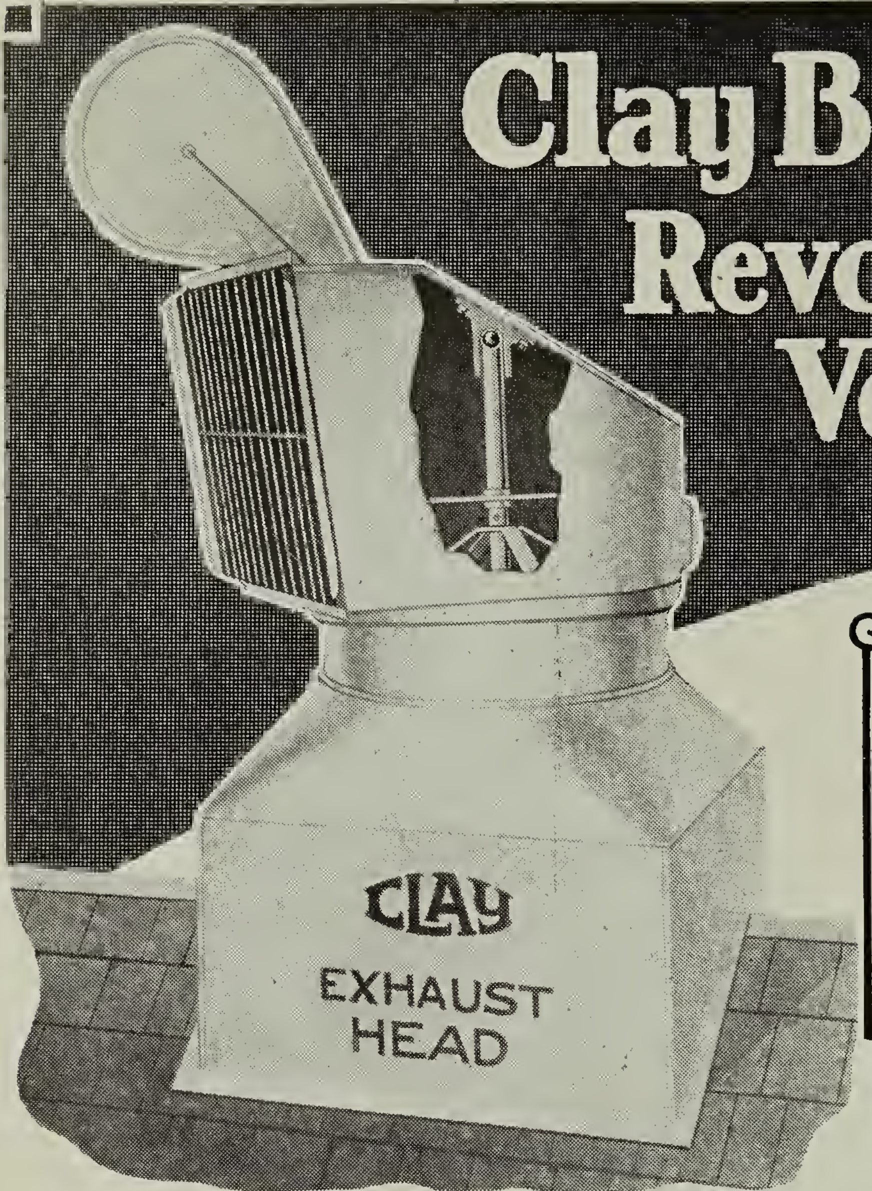
Operating Intakes

Set control indicator on underneath of intake box at "maximum air flow" at all times except when the temperature in the house is too low for comfort. Control indicator should be set at "medium air flow" or "minimum air flow" during extreme weather, as required for maintaining proper temperature in the house. See page 23V and page 50V for further information regarding volume regulator. If part of the intakes in a complete system must be closed off completely due to house being only partially filled with stock or because room is too cold, see that dampers in all foul air flues are closed off in proportion. Thus, if one-fourth of the intake regulators are completely shut off, close dampers in each flue one-fourth way, etc.

Foul Air Flue

This illustrates method by which outtakes are swung to one side for use in summer, permitting hot air to escape directly through ventilator head. The damper at bottom of the flue should be open all the way, unless part of the intakes are closed, then all dampers should be regulated according to number of intakes closed off.

Clay Best Quality Revolving Head Ventilator



Made of very best grade galvanized copper bearing steel, 26 gauge in 12″ flue size.

Has channel iron reinforcing band at bottom of revolving head, giving it stiffness and strength. Head can not bend or get out of shape which might cause it to bind.

Braced inside with heavy gauge band irons—galvanized to prevent rust.

Finish, satin silver aluminum.

Best grade revolving head ventilator made. Draws out foul moist air, providing continuous circulation through the building.

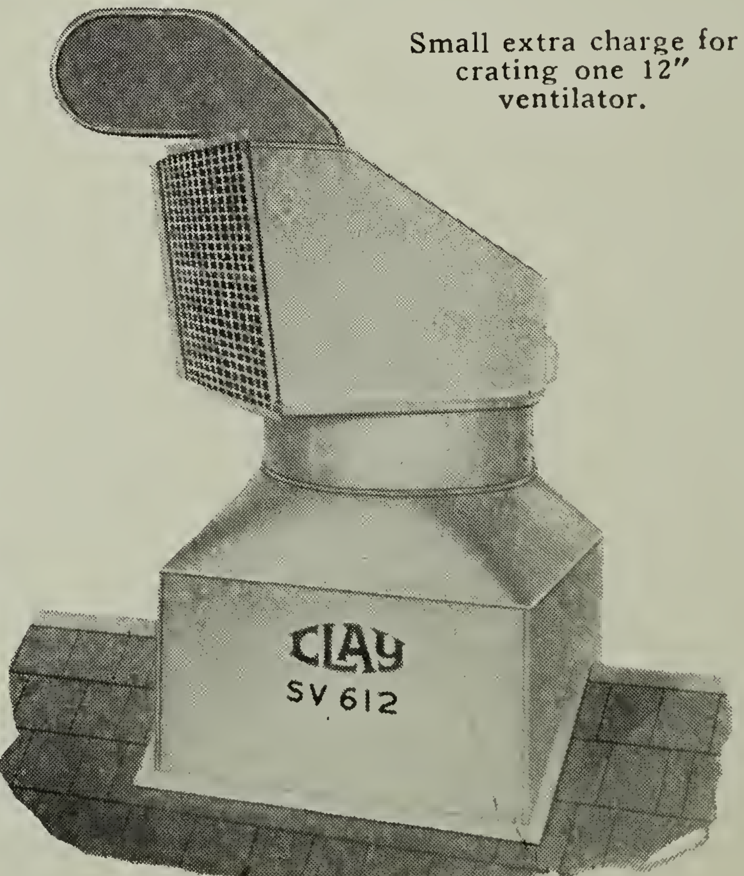
The revolving head is perfectly balanced on patented oilless ball bearing pivot. Bird screen is 14 gauge wire, electro-welded, stronger than hardware cloth.

SV412—12″ flue.	Crates 2 or 3,	70 lbs.-94 lbs.—	Base size 16″ x 16″
SV415—15″ flue.	1 to crate	60 lbs.—	Base size 19″ x 19″
SV418—18″ flue.	1 to crate	78 lbs.—	Base size 23″ x 23″
SV424—24″ flue.	1 to crate	152 lbs.—	Base size 29″ x 29″

Special Low Price Revolving Head Ventilator

A real bargain ventilator, sturdily built. No weak flimsy material used, altho price is extremely low. 26 gauge copper—bearing galvanized steel. Head turns on ball bearing pivot inside cast iron housing. Has heavy bead formed at bottom of head for stiffness. Bird screen, No. 2 hardware cloth. Made in 12″ size only. Screen should be removed when ventilator is used on poultry houses as feathers are apt to clog it. This ventilator can be used with complete ventilating system. Head is balanced and turns in slightest breeze.

SV612—12″ flue; base size, 16″ x 16″. Crates 2, 58 lbs.; 3, 81 lbs.



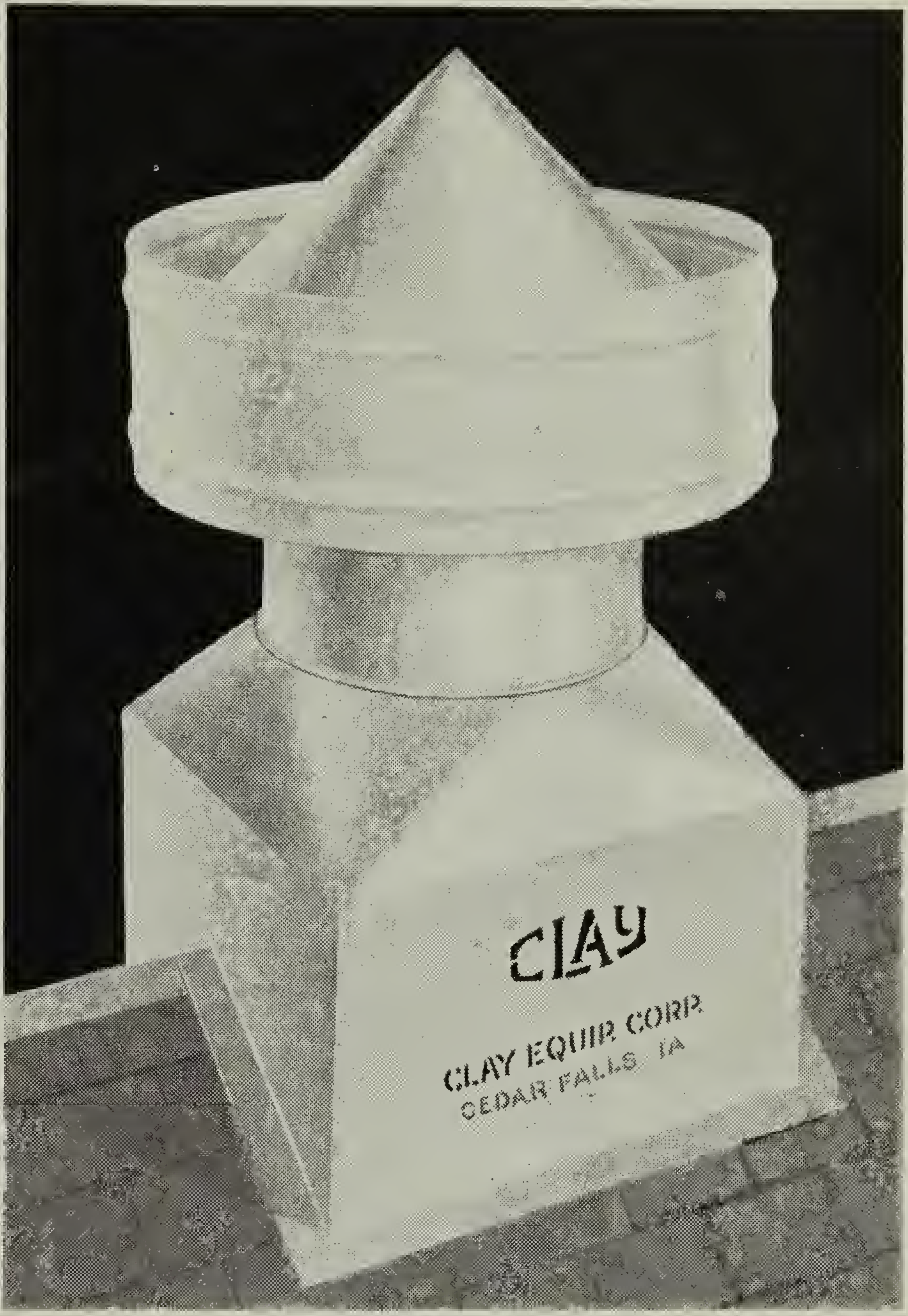
Small extra charge for crating one 12″ ventilator.

Clay Stationary Head Ventilators

for Hog and Poultry Houses

Dr. Wm. H. Walker, Prof. Chem. Engineering, Massachussetts, writes: "I do not know of a single instance in which copper bearing steel has not outlasted every other type of commercial iron or steel available."

All Clay Sheet Metal Products are Manufactured from Copper Bearing Galvanized Sheets.



SH12—12″ Stationary CLAY Ventilator.

Specifications

Made of very best grade 26 gauge copper bearing steel.

Ventilator head is stationary. Opening under weather band is covered with bird screen. We advise removing bird screen as they tend to catch feathers and sometimes collect frost.

Braces on inside are heavy gauge galvanized band iron.

All seams are copper or brass riveted or double locked seam.

Finished in satin aluminum.

A good quality ventilator at low price. Only the very best materials used.

Its design is simple. Nothing to get out of order. Works perfectly at all times. The efficiency is about 10% less than SV412. Draws the foul air out of the building no matter from which direction the wind blows.

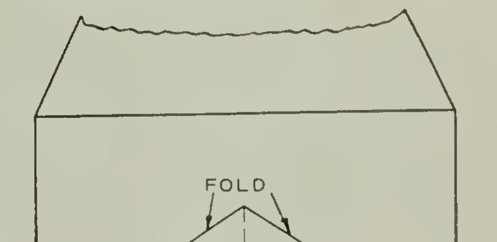
Designed for use with complete CLAY Ventilating System.

Made in three sizes—12″, 15″ and 18″; bases 16″ x 16″, 19″ x 19″ and 23″ x 23″.
SH12—12″ ventilator (Crates 2 or 3, 64 lb., 89 lb.)
SH15—15″ ventilator (Crates of 1 only—53 lb.)
SH18—18″ ventilator (Crates of 1 only—75 lb.)
Small extra charge for crating 1-12″ ventilator.

WRITE US FOR PRICES

Erecting SH Style Ventilator

Mark off pitch of roof on two sides of base. Cut vertical slit to point where two lines meet. Fold back along lines. Leave 2 inch overlap for flashing by trimming off along dotted lines as shown.



Brooder House Ventilators

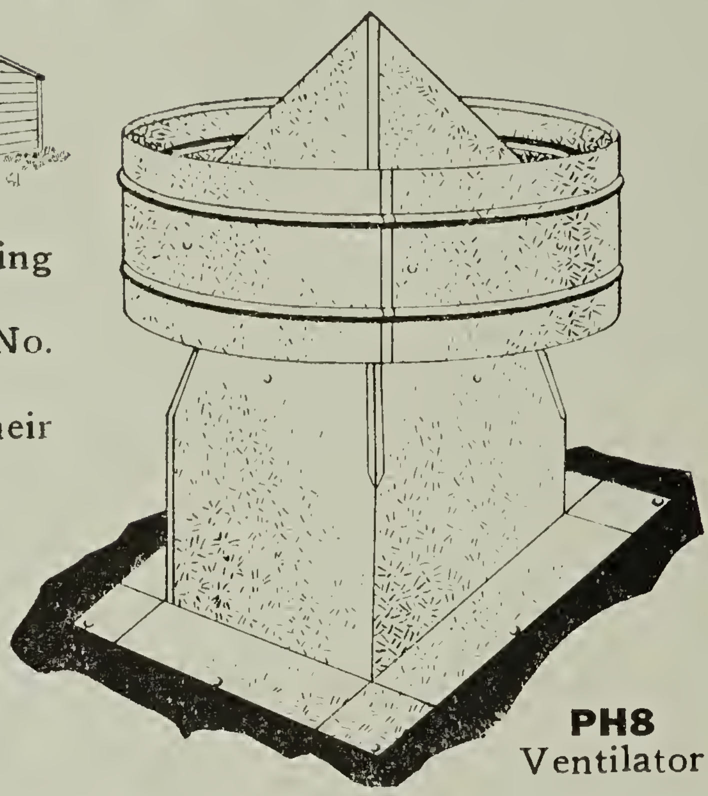
Nothing is more discouraging to poultry raisers than to find dead chicks in their brooder houses every morning.

During the night chicks pile up and smother. Drafts chill them. Night after night chicks die from stifling air inside brooder.

The CLAY Brooder House Ventilator, No. **PH8** is the surest remedy.

Farmers use these small ventilators on their individual hog houses.

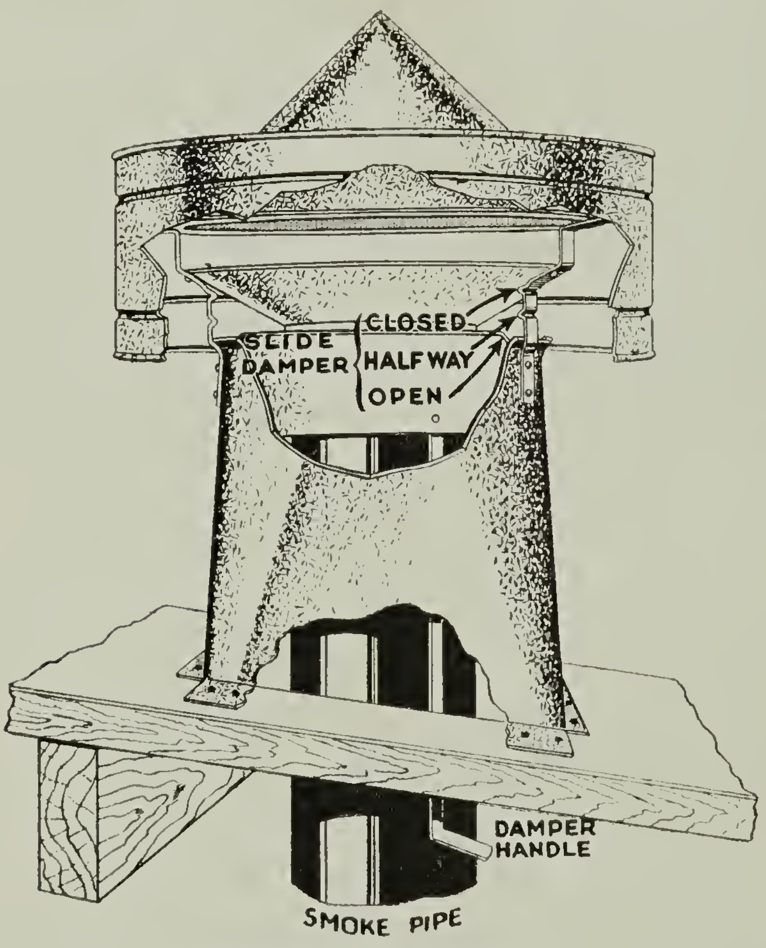
Base—8″ square.
Band—15″ dia. 4½″ wide.
Height—20″.



PH8
Ventilator

Made of 26 gauge copper bearing steel, brass riveted and soldered seams.
PH8 Brooder House Ventilator (crates of 6 — 52 lbs.). Extra charge small lots.

A New Principle in BROODER HOUSE VENTILATOR DESIGN with Damper and Smoke Pipe Connection



SBH8-5 Ventilator

Novel design, with smoke and foul air exhaust through separate pipes into same ventilator head. Protected against down drafts, it is weather proof for both smoke pipe and ventilating flue. Inverted cone at top of smoke pipe protects air flue from sparks. Damper adjusts at three positions, open, half open and closed. Can be used on flat roofs or in the case of the **SBH8-5** by cutting up 2″ in each corner of the base, then marking pitch of roof along two sides of base and folding back along line, it can be erected on shed roofs. However, we make this same ventilator (**SBH8-5-A**) with an adjustable base, all ready to erect on roof of any pitch.

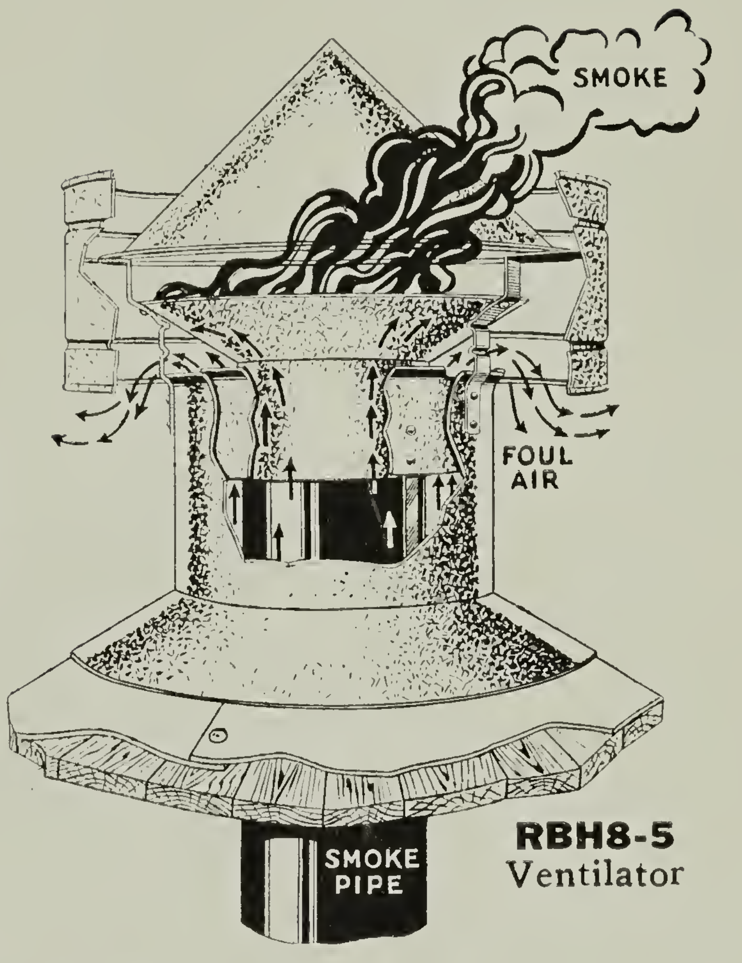
Connection inside for 5″ smoke pipe. Flue diameter 8″—height 20″. Outside weather band 15″ diameter. Made of 26 gauge copper-bearing steel, suitable for brooder houses up to 12′ x 24′.

SBH8-5 (6 per crate, weight 68 lbs.)
SBH8-5-A (With round neck and adjustable base like **BH8** page 59V) (6 per crate, weight 75 lbs.)
Extra charge smaller lots.

Write Us for Price List

Brooder House Ventilators

Round Roof Brooder Ventilator—8 Inch Flue 5 Inch Smoke Pipe Connection

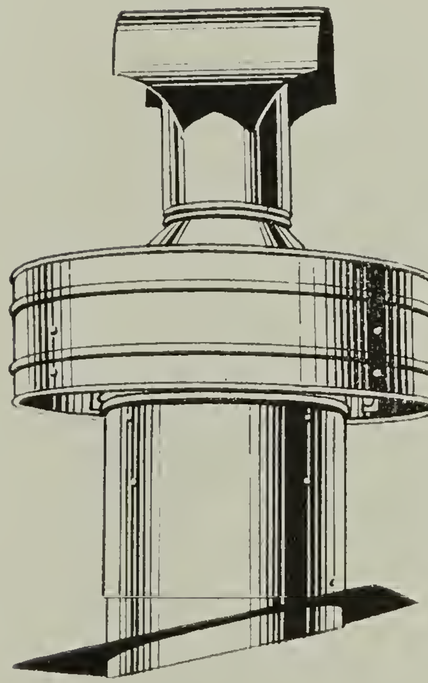


RBH8-5
Ventilator

Neck, head, damper and smoke pipe connection same as SBH-8-5 on page 58V. Roofing slips under upper flange which acts as flashing. Surprisingly unique, simple and substantial construction. 8″ flue—5″ smoke pipe connection.

RBH8-5—Ventilator
(6 per crate — weight, 70 lbs.)
Extra charge smaller lots.

Adjustable Base Brooder Ventilator



Strongly made of 26 gauge copper-bearing steel. Weather band firmly braced on inside with flat irons, galvanized. Cap removable for extension of 5″ diameter smoke pipe. The flue is 8″. Flat base is adjustable to fit various pitch roofs, from flat to 20-degree pitch.

This same adjustable base is also supplied on our SBH8-5-A page 58V.

BH8 — Brooder Ventilator. (Packed 3 per crate—weight, 45 lbs.) Extra charge smaller lots.

BH8-A — Same as BH8 except with round base as RBH8-5 above.

Clay Ventilation of Brooder Houses

Too many baby chicks never get a chance to grow up and show what they can do. Give them their chance. Provide your brooder house with a CLAY Ventilating System at a most reasonable cost. It will insure your chicks an even, regulated circulation of air in the brooder. The CLAY intake regulator is equipt with an automatic valve which prevents more than the required, measured amount of air passing into the house. The ventilator on the roof acts as an air exhauster of both foul air and the smoke from the stove.

We Furnish Plans for Building Brooders

See Plan and Complete Ventilation Information

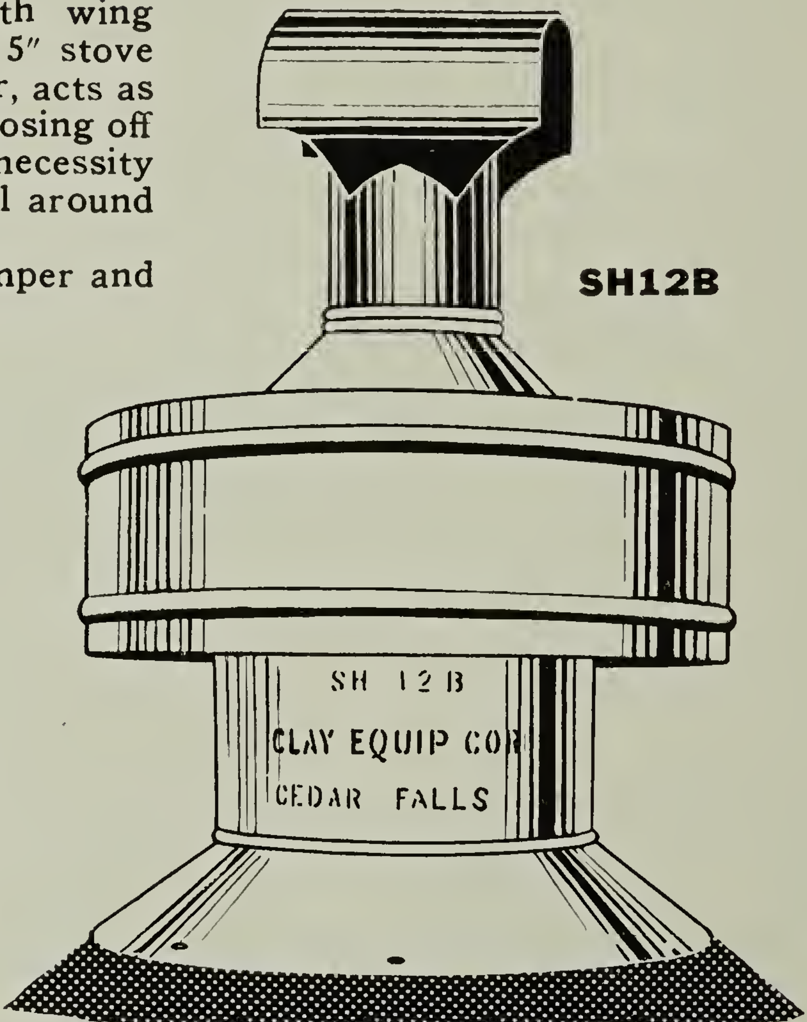
Brooder Ventilators

Round Base Ventilator

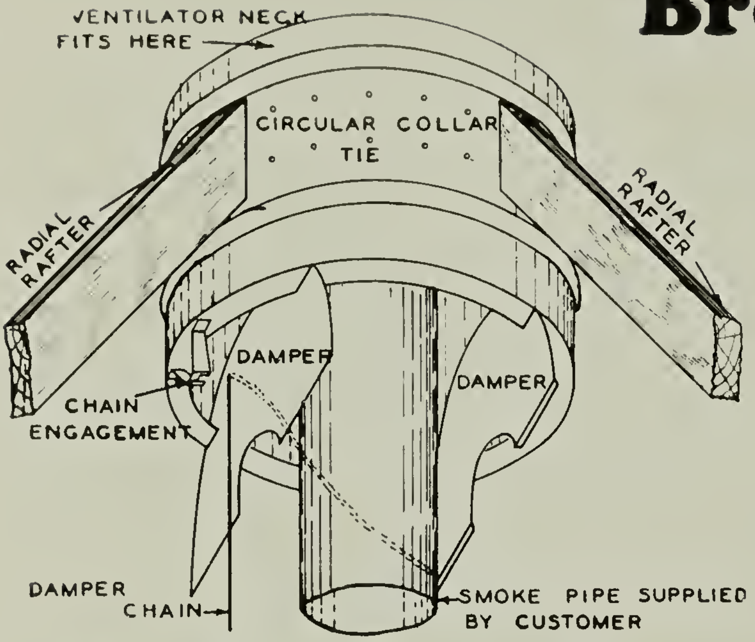
Twelve inch flue ventilator designed especially for round, octagon and hexagon roofs, with 30 degree pitch or more. Ventilator draws out foul air. Cap is removed for smoke pipe extension. Cap size 5″ diameter, flue diameter is 12″.

SH12B—Ventilator. 2 per crate, 40 lbs. —3 per crate 68 lbs.

Extra charge for crating one.



SH12B

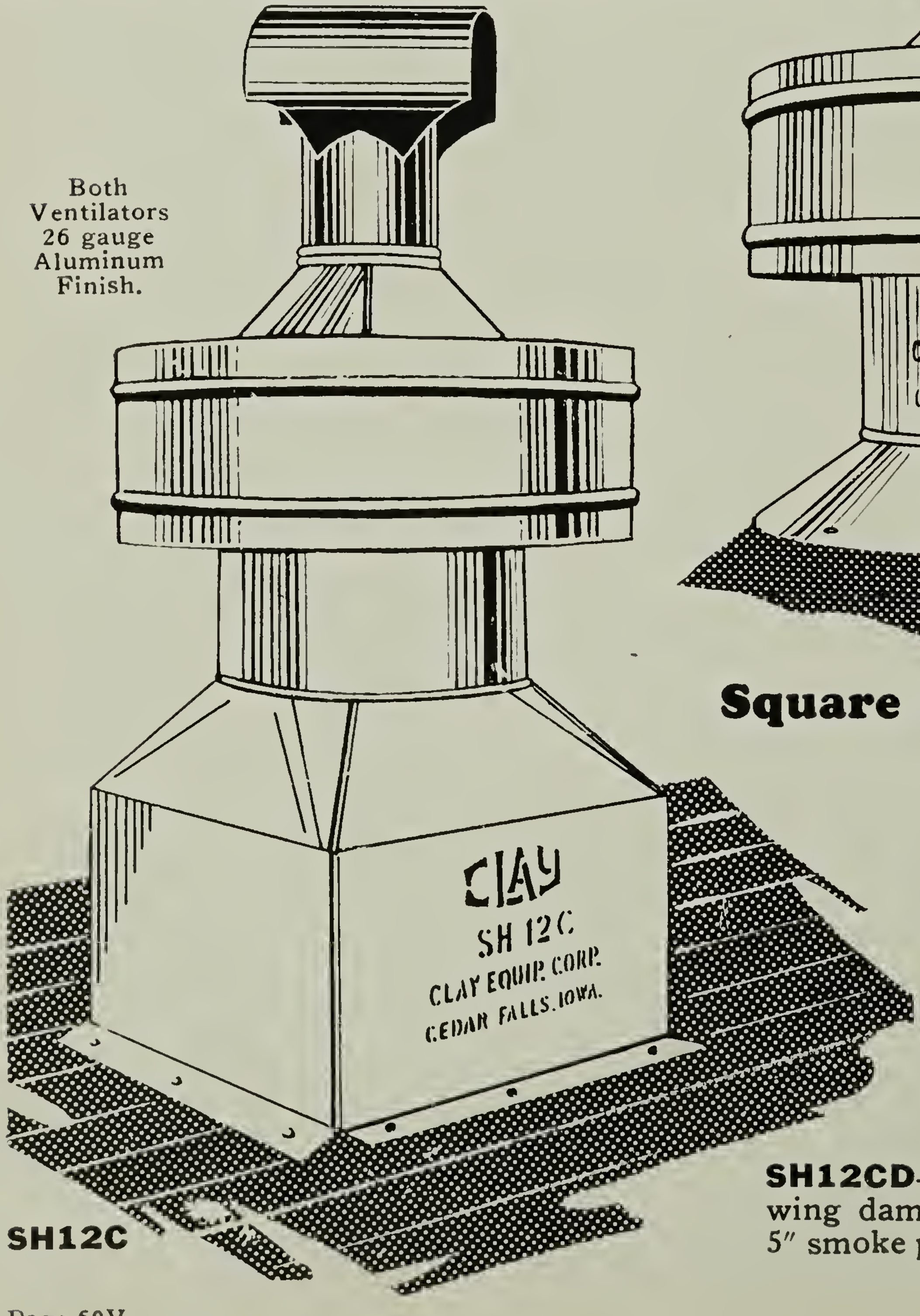


Steel Collar and Damper

20 gauge copper-bearing steel ring, with wing damper and chain, for connection around 5″ stove pipe. Used with **SH12B** brooder ventilator, acts as a tie for rafter ends as well as a means of closing off air movement thru ventilator. Eliminates necessity of wood collar tie. Nail holes punched all around ring for ease in erecting.

BHCT12—Collar tie. (Complete with damper and chain.) One per crate, weight 15 lbs.

Both Ventilators 26 gauge Aluminum Finish.


CLAY
SH 12C
CLAY EQUIP. CORP.
CEDAR FALLS, IOWA.

SH12C

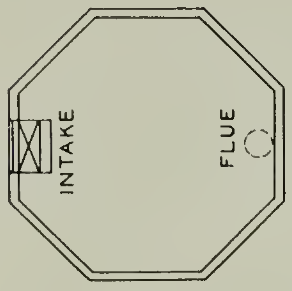
Square Base Ventilator

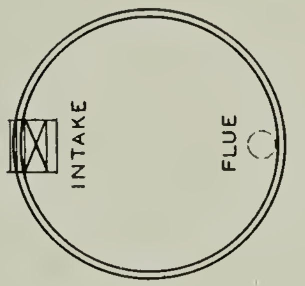
Is used on shed roof brooders or base can be cut to fit ridge. Has cap for smoke pipe extension, cap 5″ diameter. Flue diameter is 12″. Well made of regular CLAY quality materials, strongly braced.

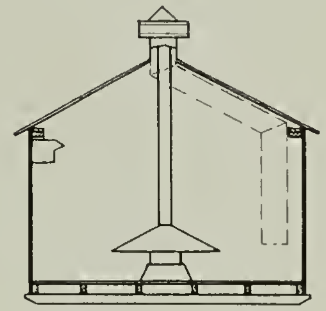
SH12C — Square Base Brooder Ventilator. One crate, weight 33 lbs.

SH12CD—Same as above with double wing damper inside base to fit around 5″ smoke pipe. One per crate, wt. 36 lbs.

Building Plans and Ventilation of Brooders

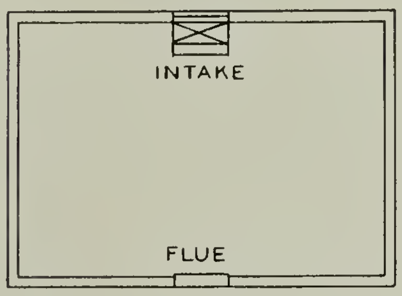


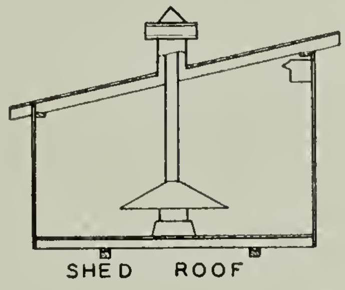


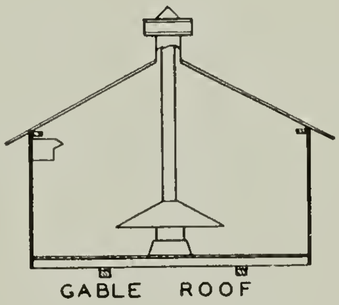


For round and octagonal brooder houses up to 12′ diameter use one **RBH8-5** ventilator (see page 59V) and one **IT422B** CLAY intake regulator (see page 22V). An 8″ round steel flue extending to within 18″ of the floor can be furnished as a part of complete system when desired. Floor flue of 26 gauge copper bearing steel, equipt with damper, cooling door, a two piece ell at the plate and one at the point where flue turns up under the roof ventilator. This latter ell has an opening in it for extension of the 5″ smoke pipe. For eight foot brooder, order 6 feet of 8″ flue and two 2-piece ells. For ten foot brooder, 8 feet of eight inch flue and two ells, for twelve foot brooder, 10 feet of eight inch flue and two ells. Flue includes damper and cooling door.

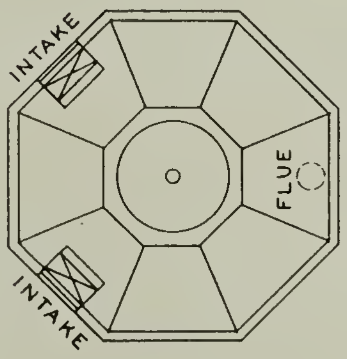
WE FURNISH COMPLETE PLANS FOR BUILDING BROODERS

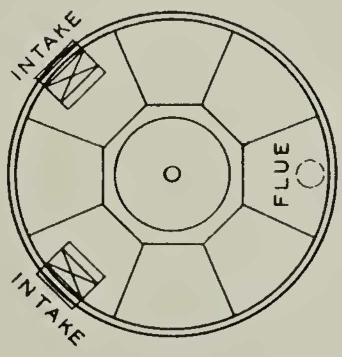


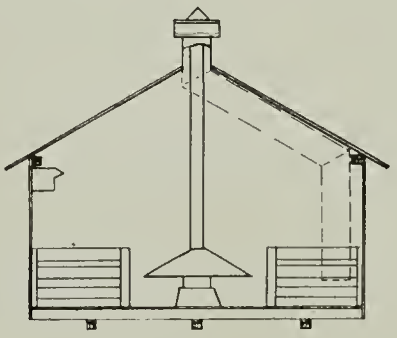




We furnish plans for rectangular brooder houses 12′ x 14′ and 12′ x 16′. Be sure to specify size of brooder and type of roof so that proper plan is furnished. For complete ventilation, system consists of one **SBH8-5A** with adjustable base (see page 58V) and one **IT422B** intake regulator, (see page 22V). Plan shows method of extending foul air flue to the floor if desired.







We furnish plans for round and octagon hog brooders, 18′ diameter, showing construction of pens and pig nursery. For ventilation, system consists of one **SH12B** ventilator (see page 60V) and two **IT4-22B** CLAY intake regulators. System can be furnished with 12″ round steel flue extending to top of pen partition when desired. Steel flue of 26 gauge copper bearing steel, equipt with damper and ceiling cooling door. A two piece ell is furnished to make the angle at the plate and also at the point where flue turns up into the roof ventilator. This latter ell has an opening for extension of 5″ smoke pipe. To conform with the plans we furnish for round and octagon houses 18′ in diameter, order 12′ of 12″ steel flue and two 12″ ells, with ventilator and intakes as described above.

If ordering flues and intakes for brooders built from plans other than those furnished by us, we suggest you send us a sketch of the building in order that we may make up materials of proper size.

Specify Whether Round or Octagon Plan Is Desired

Poultry House Ventilation

THE DIFFERENCE LIES IN WINTER EGGS

The profit you get from your flock depends to a great extent upon the number of eggs you get from each hen during the entire year. When weather conditions are ideal, with very little change in temperature or humidity, there is no great difficulty in getting good egg production. These ideal weather conditions are to be had about 40% of the year with no effort on your part. How about the other 60%? During late fall, winter and early spring, when the flock must be housed 24 hours a day you must provide a condition as close to ideal as possible. Regardless of the quality of flock, feed or care, a hen cannot produce at her best if temperature and humidity undergo rapid and violent changes. This is what happens however in the poorly ventilated uninsulated poultry house, during cold weather. These changes result in a falling off in egg production which reduces the yearly average and cuts profits, at times to the point of losses instead of profits. Good dividends can be had from the investment in a CLAY Ventilating System in the well built poultry house. A CLAY ventilating system in your house means you provide your hens with an even, regulated circulation of air at all times, under control and without drafts.

Give Her Summer Conditions In Winter Time with Clay Ventilation in an Insulated Poultry House

CLAY EQUIPMENT CORP., Cedar Falls, Iowa

The Story of a Sale

"Build and equip your poultry house for profitable egg production or don't build at all," was our advice to Mr. Wilson.

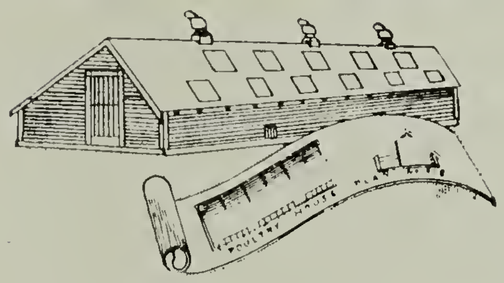
The house illustrated is the result of a heart to heart talk with Mr. Wilson on how to build a profitable poultry house.

First, last and all the time, the one thing essential to poultry success is healthy hens. The health of any flock, particularly if they are housed in cold climate, depends primarily on good housing conditions. Thus, we pointed out to Mr. Wilson that four warmly built walls and a roof does not make a good poultry house.

Though he might build his house warm enough to shut out the cold, the very first freezing weather would turn his house into a water-soaked, foul, disease laden shed instead of the warm, cozy quarters he intended.

CLAY

Detailed Plans Interested Him



When Wilson and his carpenter saw these detailed plans he exclaimed. "Say that's just the stuff. We won't have to waste any time figuring out how to go ahead."

Self Regulating Ventilation Sold Him

VENTILATION was the answer. Perfect air control with constant air movement that would put pep and vim into his flock, making them vigorous birds and heavy winter layers.

All poultry men insist on a house full of sunshine and warmth.

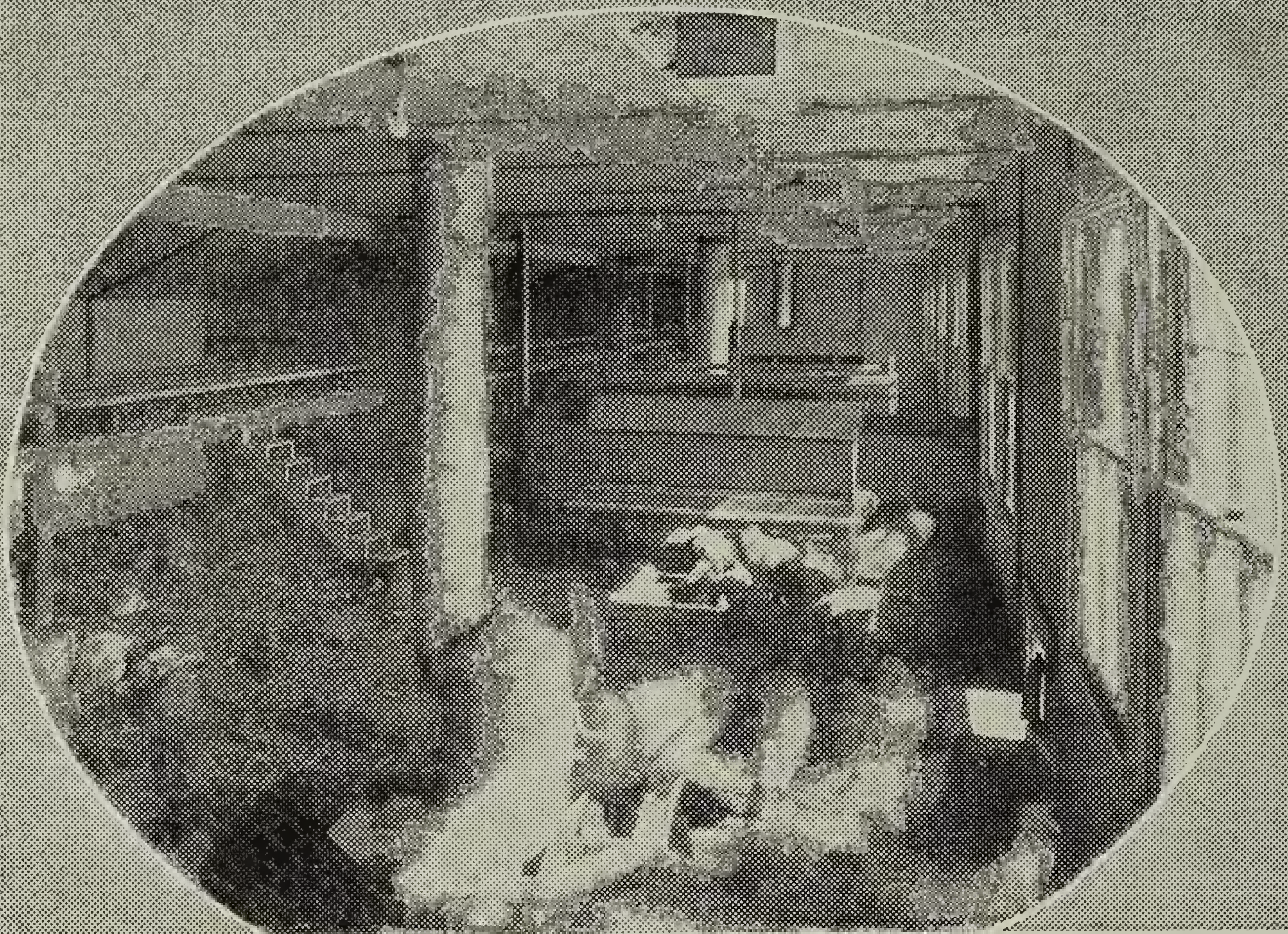
ROOF WINDOWS solved this problem. Obviously windows on the roof throw direct light back under the roosts and flood the entire building with invigorating sunlight whereas, windows on front of building allow sunlight to go but a short distance into the house. CLAY Roof Windows with $\frac{3}{16}$" ribbed glass admit much more light than do ordinary windows, thus less windows are needed and a warmer building results.

THE NET RESULTS ARE: That Mr. Wilson has a house warmly built, properly equipped, lots of sunlight, good circulation of air, clean quarters, dry walls, ceiling and litter. All these results in healthy hens, more eggs, less feed, less labor and larger profits.

Note. On January 15th, 1929, with temperature outside 17 below zero, the inside 27 above—the air was sweet and clean—no frost, no moisture and the bedding dry.

Is He Satisfied?

Gentlemen:—"I have never seen anything to equal my house and the ventilation is sure doing the work. My house is just as light inside as outside. Lots of people stop to see it and I tell them all its is the best there is. Only last Sunday one lady spent a half hour in this fresh cozy atmosphere among my birds." Yours very truly, Ed. Wilson.

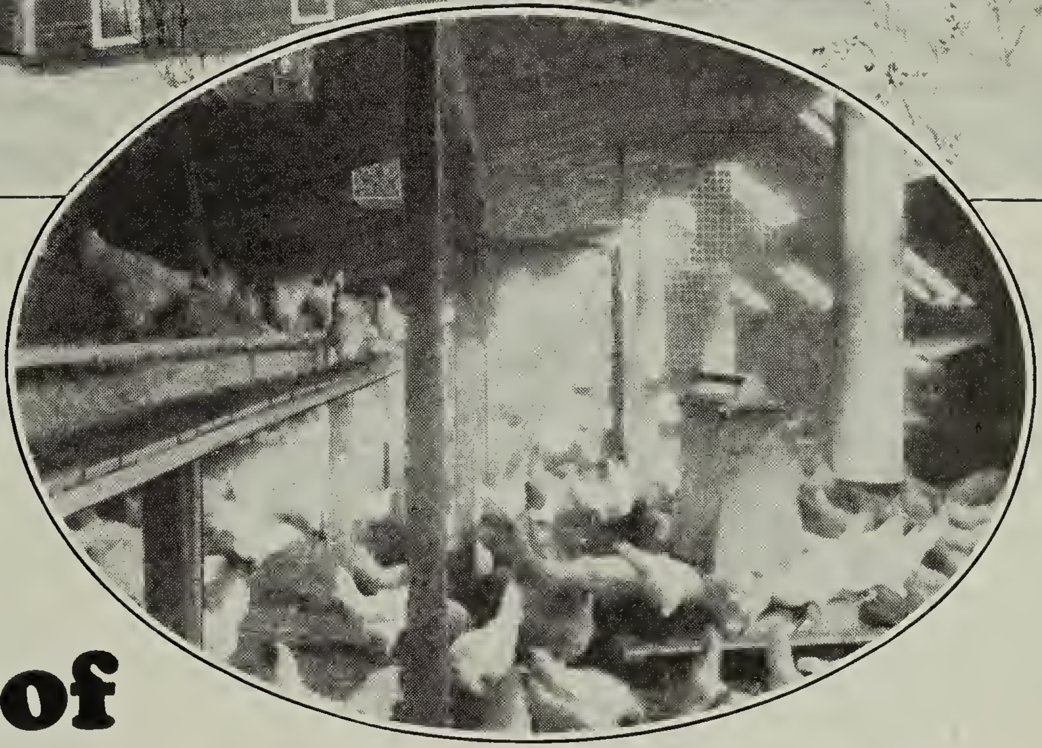


MY SATISFACTION IS COMPLETE

It may interest you to know how pleased I am and how well your ventilating system is working. My satisfaction is complete. My house is 70′ by 20′. I have three ventilators and flues, and nine intakes and the air is fine and the house has no bad odor. The droppings become dry over night and the litter is always dry and clean. When the weather was 29 and 30 some days ago my house registered 62.

I have at present 170 pullets in my house. 15 pullets have been laying since August 6th. These 15 were hatched March 10th, and have averaged 20 eggs a month a piece. I feed well and give them good attention but the dry floor and good air is a big factor. I will use about 40 of your roof windows and a complete ventilating system in my new 120 ft. house. The saving of your system over others was sure a great help, enough to equip my house with birds and equipment such as fountains, feeders and nests. I will be glad to show my house to any one you may care to send.

J. E. Strawn, Hanna City, Ill.



These birds are enjoying springtime conditions while hard winter rules outside. They respond with increased egg production.

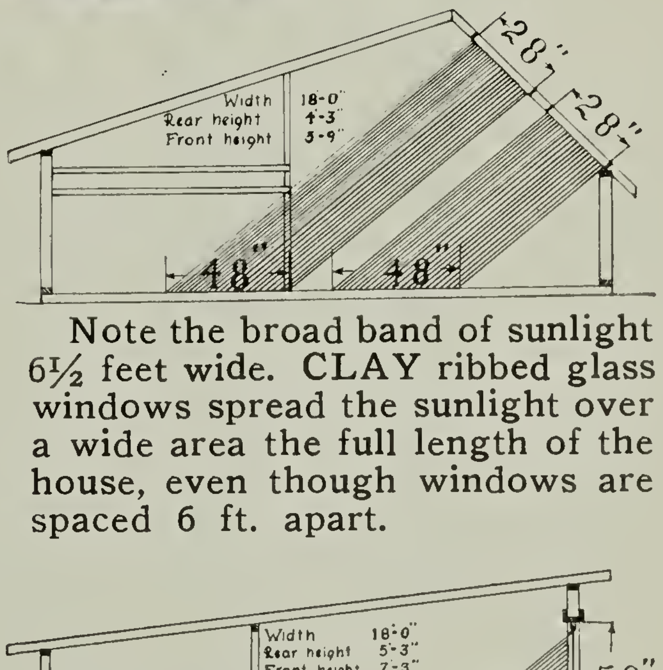
Clay Roof Windows

Do the Most Good

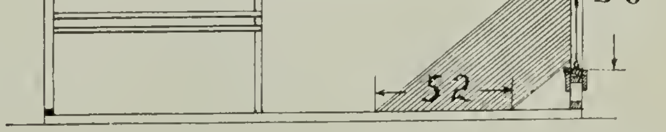
All poultry and hog raisers insist on a house full of sunlight and warmth. CLAY Roof Windows throw direct light back under the roosts and flood the entire house with invigorating sunlight whereas, windows on front of building allow sunlight to go but a short distance into the house.

CLAY Roof Windows equipped with thick $\frac{3}{16}''$ ribbed glass admit far more light than do ordinary windows, therefore considerably less windows are needed and a warmer house results.

Just as soon as the sun peeps over the eastern horizon broad bands of warm sunlight stream through the CLAY Roof Windows. Not merely spots of sunlight here and there, but broad diffused light sweeping over every foot of the poultry and hog house.

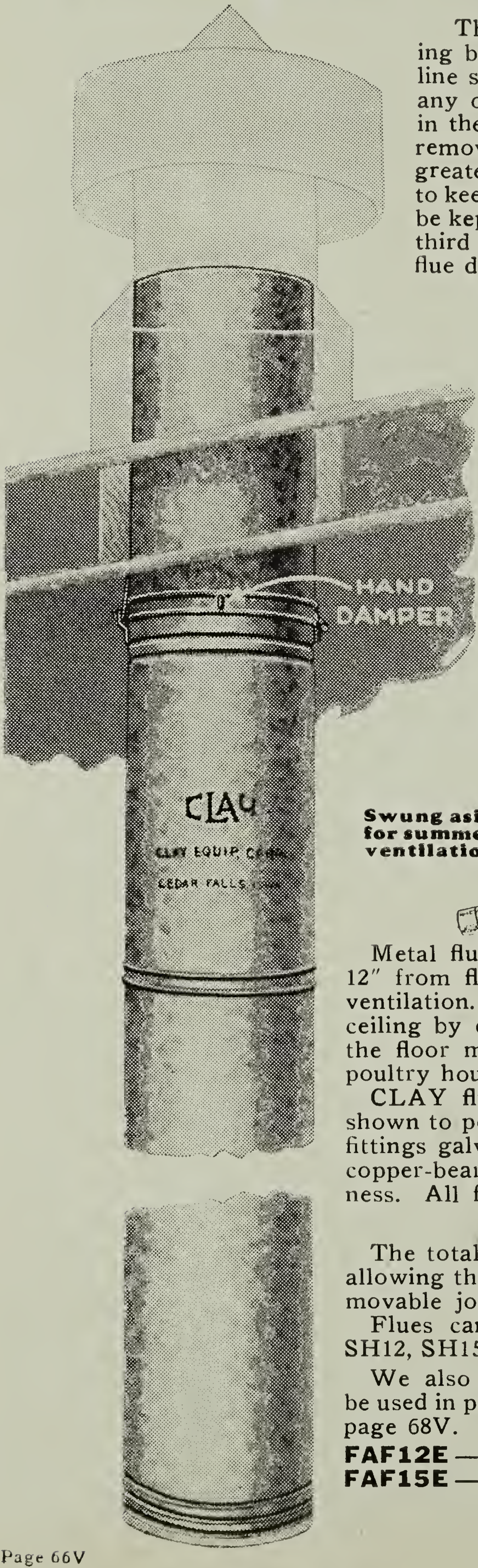


Note the broad band of sunlight 6½ feet wide. CLAY ribbed glass windows spread the sunlight over a wide area the full length of the house, even though windows are spaced 6 ft. apart.



Shows actual spot of sunlight through ordinary window glass where windows are in front of house. Glass shown is same size as two CLAY roof windows, yet only 52" of sunlight on floor. More glass area for heat loss, yet less light and no diffusion of sunlight.

Keep the Heat in Your Poultry House by Removing Foul Air from Near the Floor



The same principle of retaining heat in the building by exhausting the foul air from near the floor line should be observed in the poultry house as in any other farm building. The only heat available in the building is that thrown off by the birds. By removing foul air at a low level we conserve the greatest amount of natural heat and are better able to keep the litter dry. The damper in the flue should be kept wide open when all intakes are open. If one third of intakes are completely closed off, close each flue damper one-third, etc.

Flues Give Best Results

To emphasize their great importance we quote below a letter from Mr. C. G. Nichols, Waverly, Iowa.

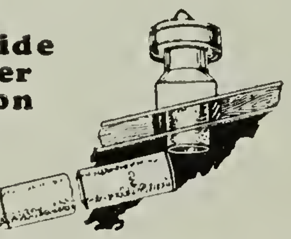
"Gentlemen: Our ventilation system consisted of five fresh air intakes and two roof ventilators with openings at ceiling.

The first two years we had damp floors and litter. Building was cleaned every week and 6″ of straw litter would only stay dry two or three days. Building was always cold.

Last year I had two 5′ flues made to extend down from ventilators. Since putting these on we have had no trouble with damp floors and building has been much warmer. I am convinced that foul air flues must be used to take the air near the floor otherwise the building is cold and damp."

Letter from C. G. Nichols, Waverly, Iowa.

Swung aside for summer ventilation



Clay Foul Air Flues

Metal flues extended from ventilator head to within 12″ from floor are absolutely necessary for successful ventilation. They prevent loss of warm air next to the ceiling by drawing the cold, damp, foul air from near the floor maintaining an even temperature inside the poultry house.

CLAY flues have manual damper in top section as shown to permit regulating the air movement. Damper fittings galvanized. Clay flues are made from 26 gauge copper-bearing galvanized steel, deeply beaded for stiffness. All fittings are galvanized to prevent rust.

LENGTH OF FLUE

The total length of the flue is 8′, the top section is 2′ allowing the flue to go into the neck of ventilator. Removable joint is below the ceiling a little.

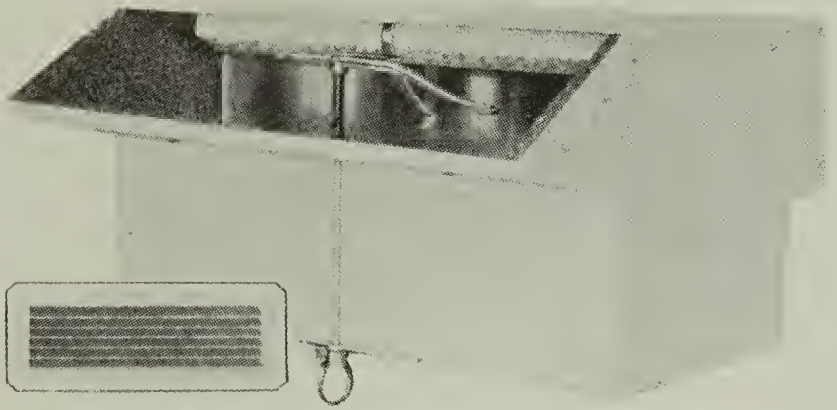
Flues can be used with ventilators SV412, SV612, SH12, SH15, SV415.

We also manufacture a telescoping flue which can be used in poultry houses, see page 51V. An insulated flue page 68V.

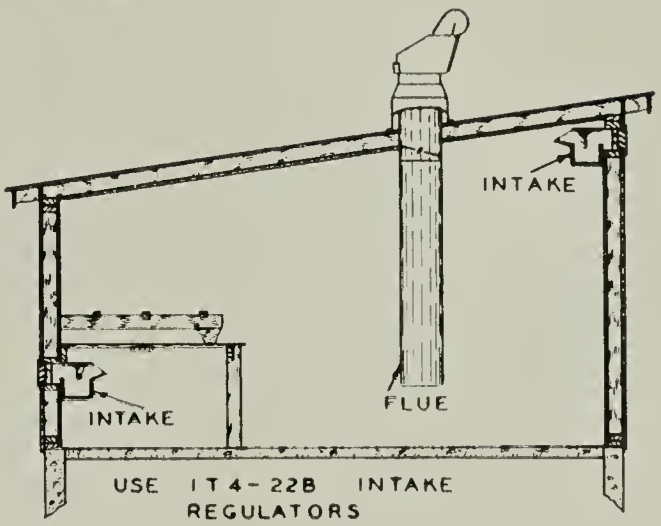
FAF12E — 12″ Flue	70 lbs.
FAF15E — 15″ Flue	81 lbs.

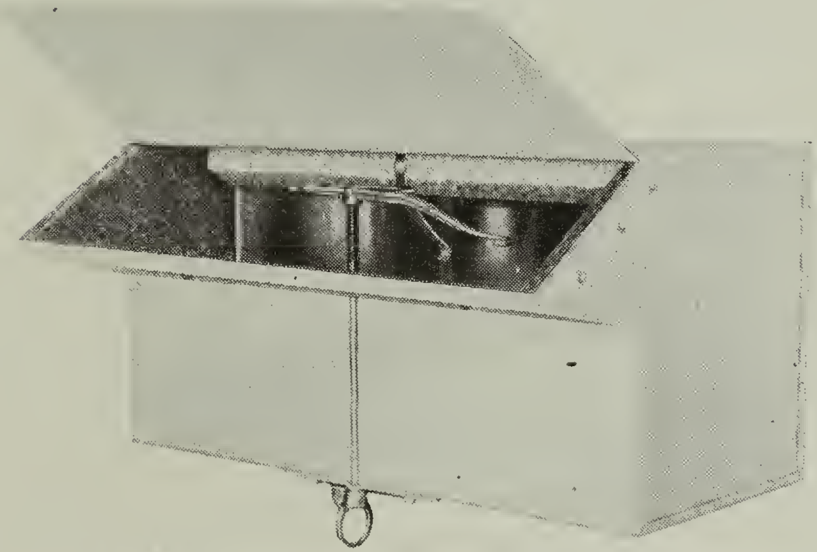
WRITE FOR PRICE LIST

Clay Automatic Intake Regulators

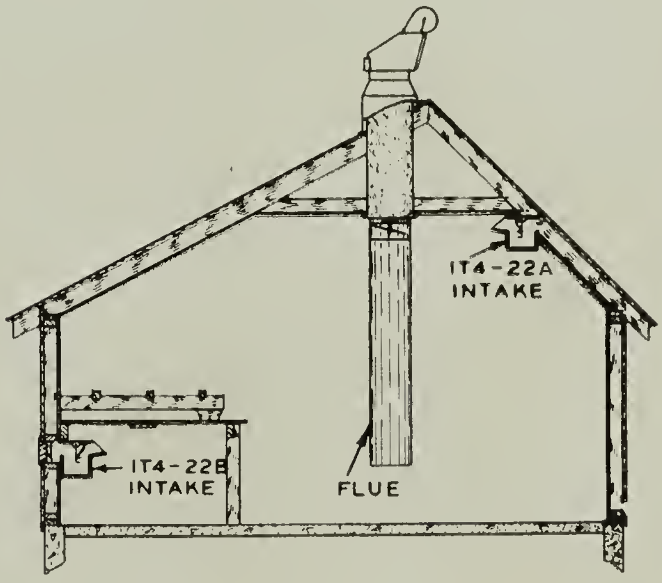


IT4-22B Intake Regulator with illustration of outside louvre. For complete information see page 23V.



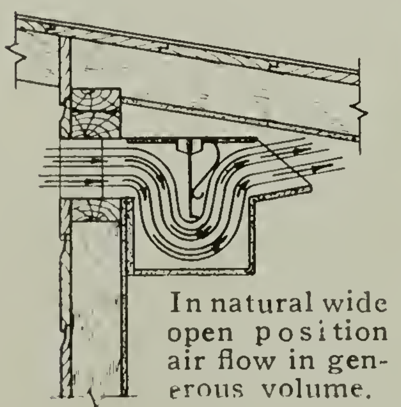


IT4-22A Intake Regulator with front extension for nailing to ceiling. Is used without outside louvre. See page 50V for complete information.

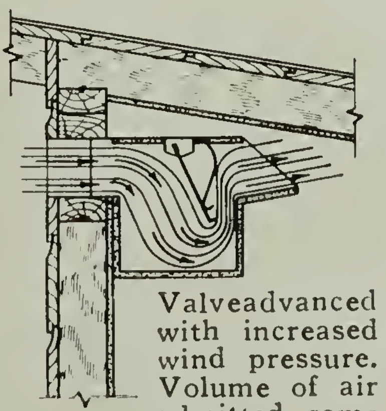


CLAY intake regulators are installed near the ceiling line in the front wall and just under the roosts in the back wall. This method of location insures a complete circulation and air change without drafts on the birds. Hens lying inactive on the roosts at night are protected from drafts of cold air dropping directly on them from intake openings. Much better results can be obtained from an installation of this nature also from a standpoint of dry floors. Use **IT4-22B** style intakes in all cases except in front walls of sunlit type houses as shown in lower sketch above, where **IT4-22A** intake regulator is used.

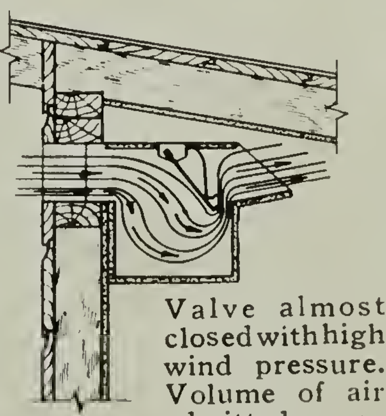
Fresh air entering thru intakes finds its way into every corner of the building. As the air enters it becomes warmed and expands, enabling it to absorb moisture, like a sponge. For detail of installation of **IT4-22B** style intake see page 36V, for installing **IT4-22A** style intake see page 55V. CLAY intake regulators are as near perfect in automatic operation as an intake can be made. They permit an even flow of air inward regardless of wind velocity. A control arm on the outside of the box permits setting of valve for various regulations of air volume. (See page 23V.)



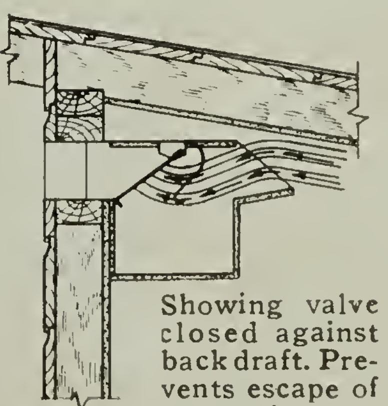
In natural wide open position air flow in generous volume.



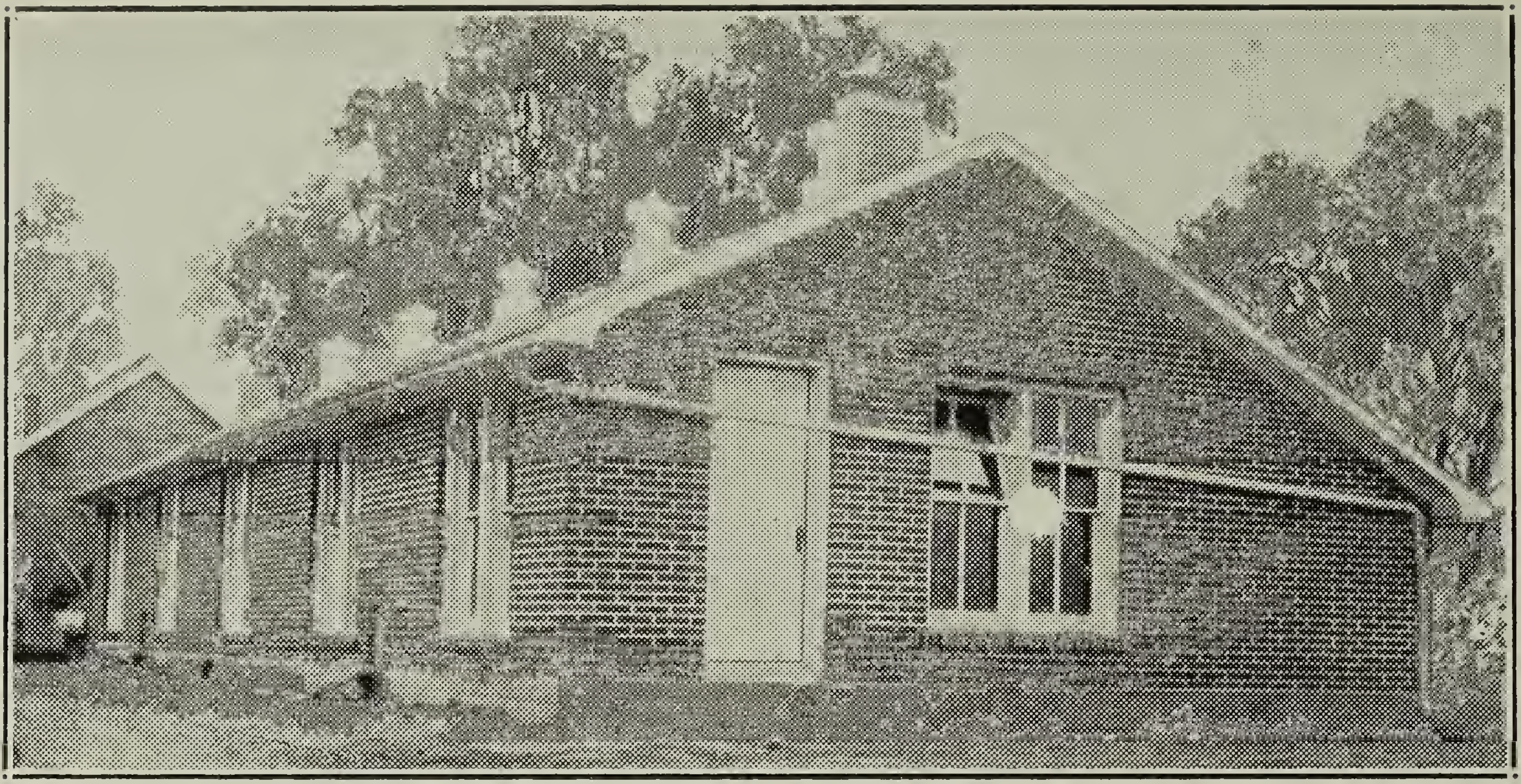
Valve advanced with increased wind pressure. Volume of air admitted same as in figure 1.



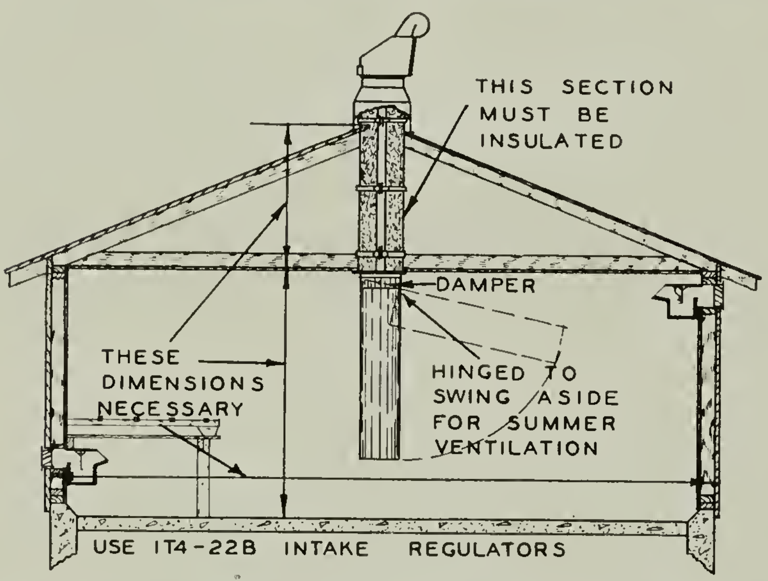
Valve almost closed with high wind pressure. Volume of air admitted same as figures 1 and 2.



Showing valve closed against back draft. Prevents escape of warm air.



Loft Type Poultry House


THIS SECTION MUST BE INSULATED
DAMPER
THESE DIMENSIONS NECESSARY
HINGED TO SWING ASIDE FOR SUMMER VENTILATION
USE IT4-22B INTAKE REGULATORS

In estimating length of insulated pipe allow 15″ extra on 12″ ventilators and 18″ extra on 15″ ventilators to fit up into ventilator head over peak of roof.

FAF12F—12″ Flue per ft. plain.
FAF15F—15″ Flue per ft. plain.

Price includes hinge, damper and ceiling collar.

IM12″—Insulation mat. per ft. for 12″ flue.
IM15″—Insulation mat. per ft. for 15″ flue.

Comes nested and crated, with all necessary tie bands.

IMPORTANT

It is very important when ordering the style FAF-F flues, as pictured here, for us to have EXACT measurements of the following.

A. Give height from bottom of ceiling line to top of ridge.

B. Give distance from floor to bottom of ceiling.

C. Give outside width and exact pitch of roof.

Unless we have this information, flues may not fit properly for swinging hinged section, or the length of top flue section may be too great to allow head clearance.

Insulated Flues for Loft

The flue section extending through the loft of the gable style poultry house must be insulated. Unless thus protected, the cold loft air chills the warm air which passes through the flue, causing continuous precipitation of moisture. Water will drip from the flue into the house, the flue will get clogged with frost near the ventilator head.

Units of Complete Clay Ventilation for Poultry Houses

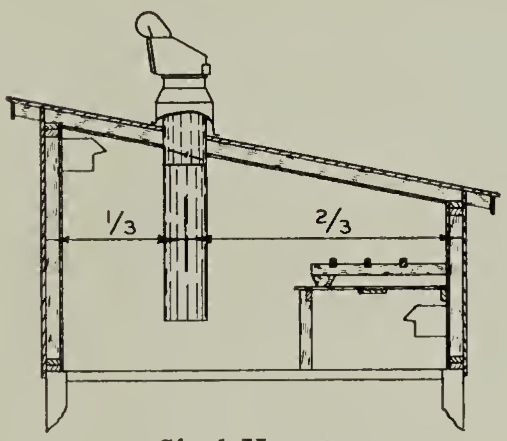
Width	16 and 18ft. wide			20 and 22 ft. wide				
Length	20 ft	40 ft.	60 ft.	20 ft.	40 ft.	60 ft.	80 ft.	100 ft.
Capacity in Birds	125 to 140	250 to 280	375 to 420	140 to 160	280 to 320	420 to 480	560 to 640	700 to 800
No. and Size Vent. style SV400	1-12″	2-12″	3-12″	1-15″	2-15″	3-15″	4-15″	5-15-
No. and Size Flues, style FAF-E	1-12″	2-12″	3-12″	1-15″	2-15″	3-15″	4-15″	5-15-
No. of Intakes, style I-T422A or I-T422B	3	6	9	4	8	12	16	20

Complete systems as outlined in the above chart include the FAF-E style flue (see page 66V) with a total length of eight feet. This includes a 2′ section into ventilator and 6′ section below ceiling. If poultry house is loft type, (see page 68V) add the necessary lineal feet of insulated flue and be sure to send us correct measurements of elevation as requested on page 68V.

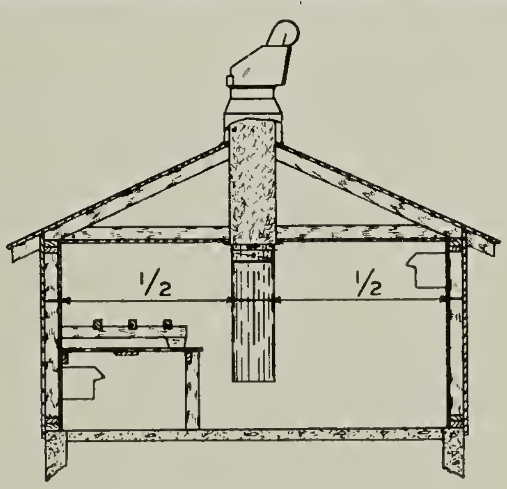
In using the above chart, if poultry house length exceeds that shown in any column, use next larger size unit. Thus: a house 16 x 30 would come under column heading "length 40 ft." All intakes are **IT4-22-B**. If house is sunlit type order **IT4-22-A** intakes for front wall (see page 67V).

The above chart shows complete system using the **SV400** style ventilator on the roof. Either the **SV612** or **SH12** or **SH15** may be substituted, reducing price of complete system. See price list for system prices using various types of ventilators.

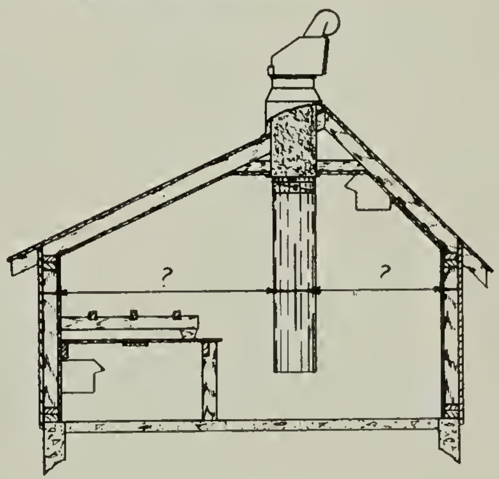
Spacing Ventilators and Foul Air Flues



Shed House.



Gable House
with ceiling.



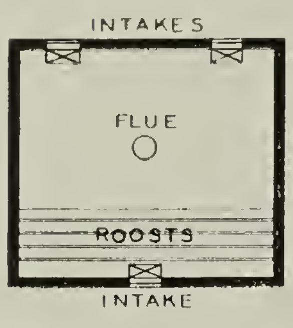
Sun-Lit House
with ceiling.

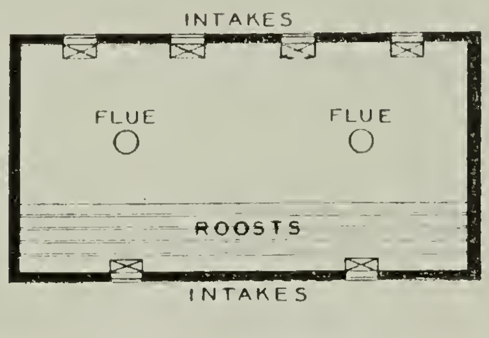
The above shows proper location of foul air flues in various types of houses in their relation to the cross section elevation of house. The following rule applies to spacing of ventilators and foul air flues in relation to the length of house, for further detail see next page.

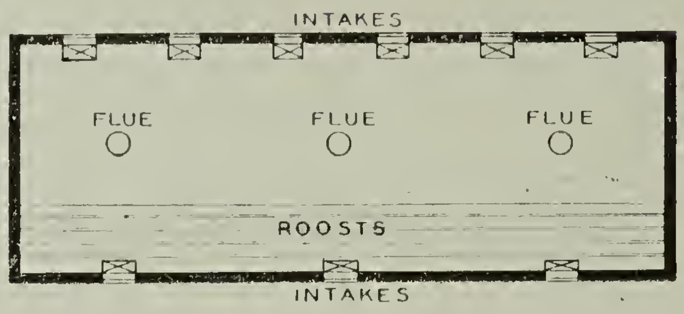
No. Vents Used	Divided Length of House By	Distance Between Wall & End Flue	Distance Between Flues
1	2	½	. . .
2	4	¼	2/4
3	6	1/6	2/6
4	8	1/8	2/8
5	10	1/10	2/10

Spacing Units—Poultry Houses

HOUSES 14, 16 and 18 FEET WIDE





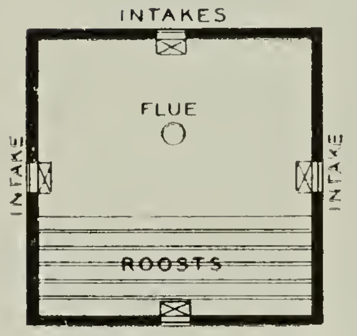


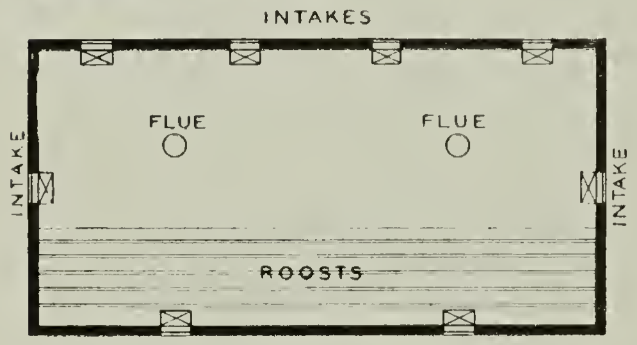
Do not install an intake closer than 4′ from any corner.

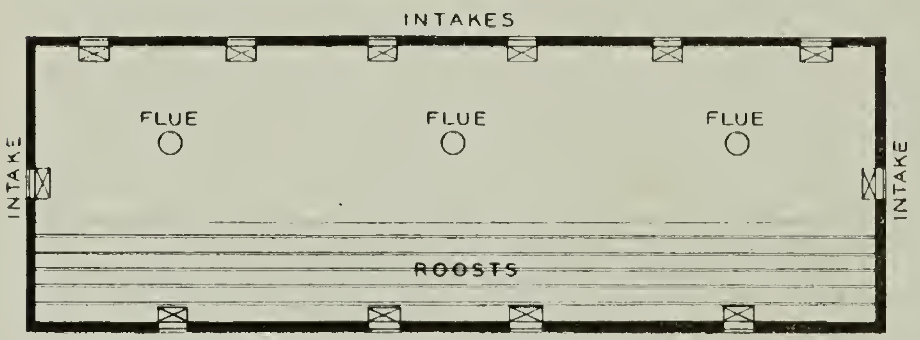
Houses 20 Feet and 22 Feet Wide

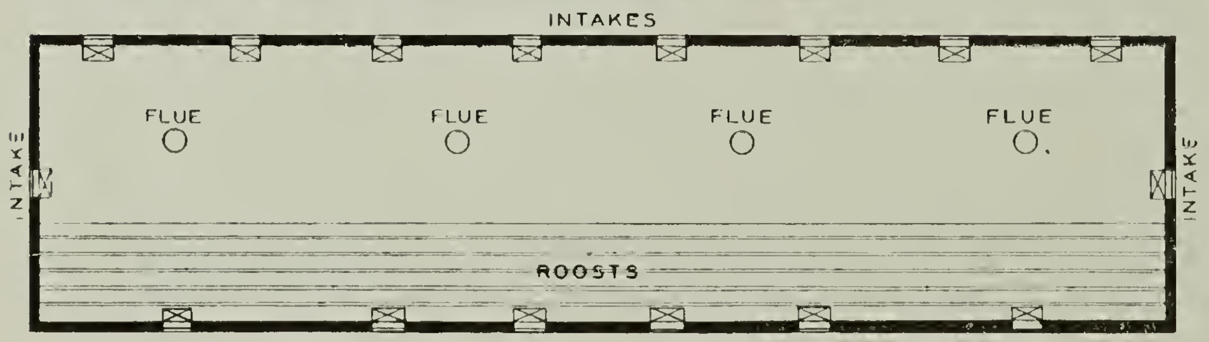
20, 40, 60, 80 AND 100 FEET LONG

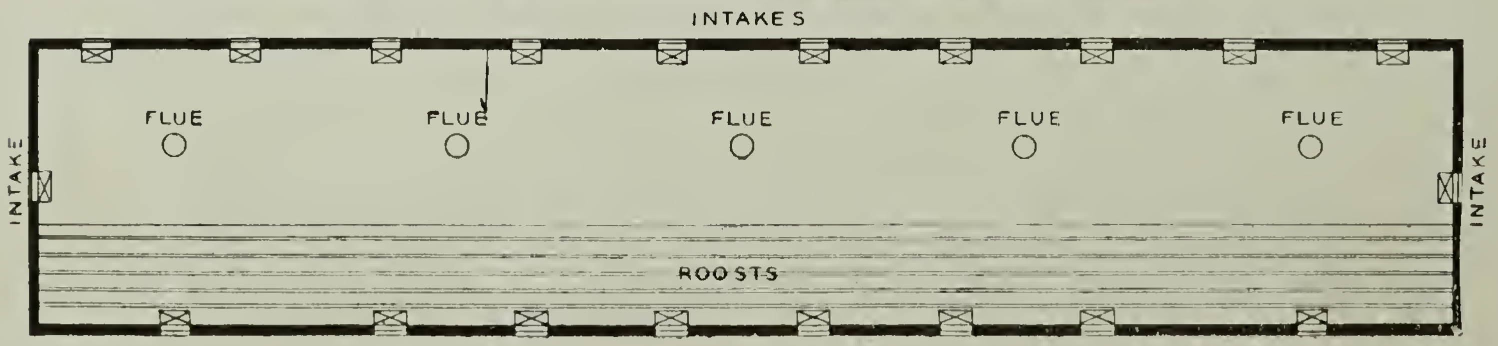
Here are shown plans of unit locations in houses 18′ and 22′ wide and up to 100′ in length as outlined in the chart on page 69V. Note intake shown on each end of these houses. If feed room closes off one end of house, add intake on that end to those in front wall. Intakes in back wall are installed under roosts (see elevation page 69V) to insure movement of air across floor for purpose of absorbing moisture. This type of installation also avoids drafts on inactive birds on roost. Do not place intakes closer than 4′ from the end of any wall. Space balance of intakes as equally across length of building as possible. Slight variations one way or another to avoid obstructions is allowable.







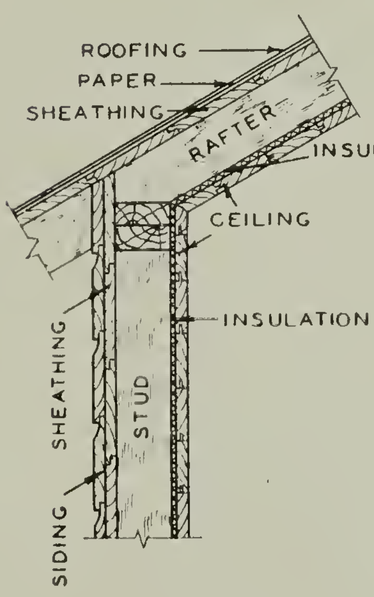


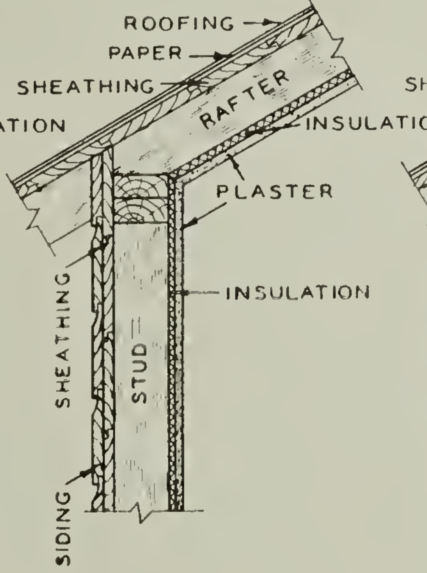


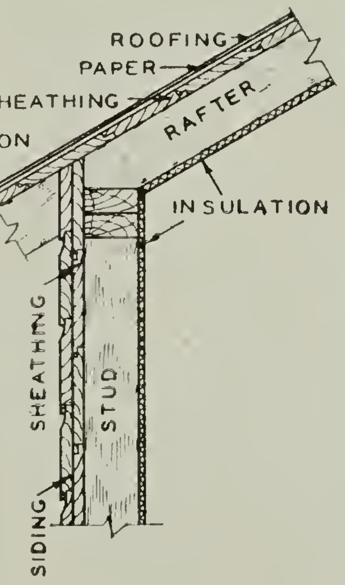
Importance of Building Construction

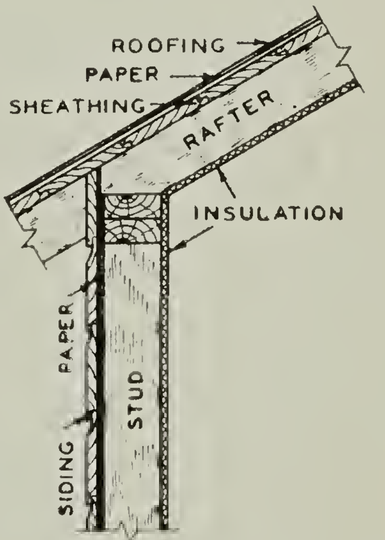
THE construction of the walls, ceiling and floors of the poultry house have a great bearing on the satisfaction you will receive from your ventilating system as well as the results obtained from your flock. One of the motive powers of air circulation through the ventilating system is difference in temperature due to heat produced by the birds. If too great an amount of heat is lost through poorly constructed walls, etc., the ventilating system is handicapped, plus the fact that moisture will be more likely to accumulate in the house. If the ventilating system must be closed off in part or entirely at any time when the house is filled to capacity with birds, it is evidence that some or all parts of the structure is allowing too great a loss of natural heat. We are interested in seeing you receive the greatest possible benefits from an installation of the CLAY ventilating system. Therefore, we offer suggestions in the following sketches for proper construction of your house. The value of these wall types from a standpoint of retaining heat are arranged by number. Please understand that we can guarantee the correct standard of results with the CLAY Ventilating System as shown on the next page, in any house with a comparatively tight wall. However, the precipitation of NATURAL moisture on walls and ceilings and the temperature of the air in the house are governed by the quality of building construction and the amount of natural heat (number of birds) available. The prevention of condensation or the formation of frost will always be in proportion to the heat retaining quality of walls and ceiling.

Lumber Walls—Recommended in Order Shown

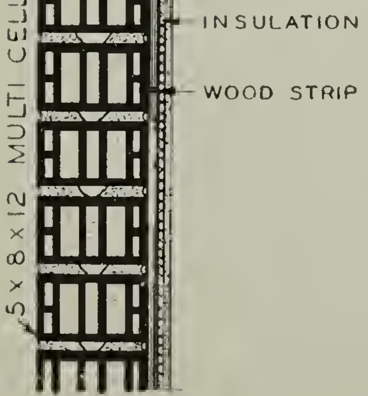


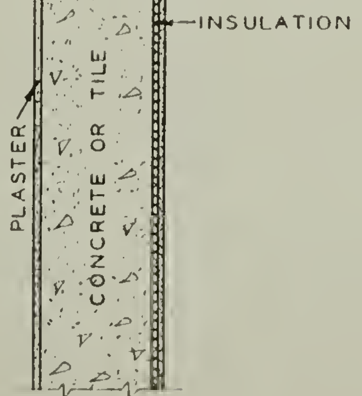


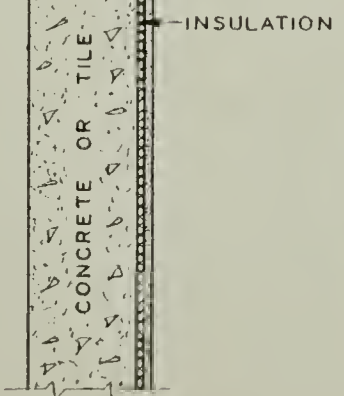


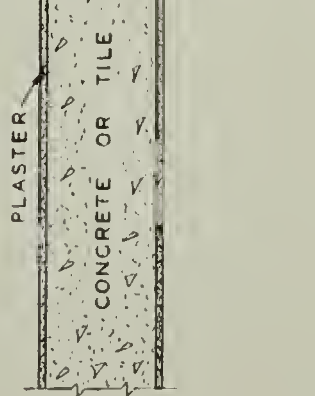


Masonry Walls—Recommended in Order Shown







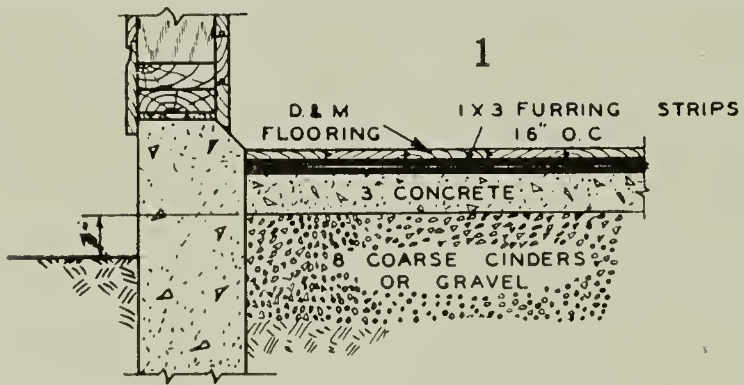


Poultry House Floor Construction

COLD, damp floors in the poultry house are surely a thing to be avoided. Two things that are the main factors in governing this condition are proper ventilation and proper floor construction. Very often the presence of a damp floor is considered to be a fault of the ventilating system, when in reality the construction of the floor itself may be the cause. Capillary attraction of moisture from the earth below or too cold an inside floor surface temperature may result in damp floors in spite of the fact that the ventilating system is circulating all the air necessary to remove excessive moisture produced by the birds.

In order to help you arrive at a type of floor construction satisfactory from a standpoint of heat loss and one which will be most likely to result in a dry floor, we offer the following suggestions. Type of construction shown first is considered most satisfactory, etc.

1



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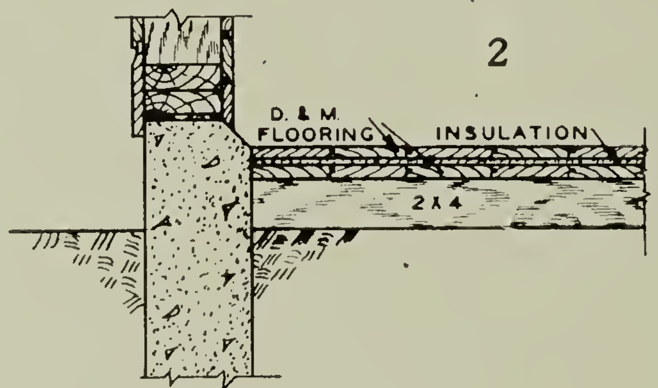

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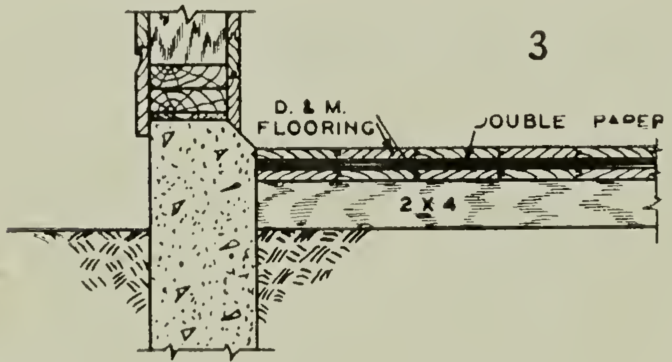

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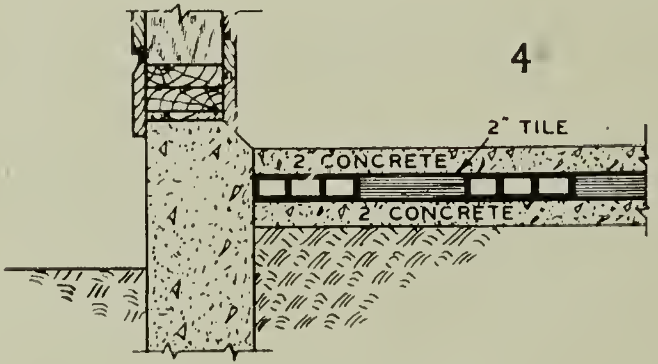

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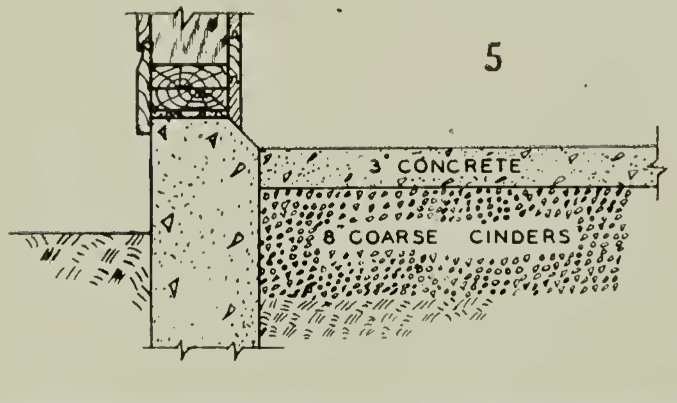

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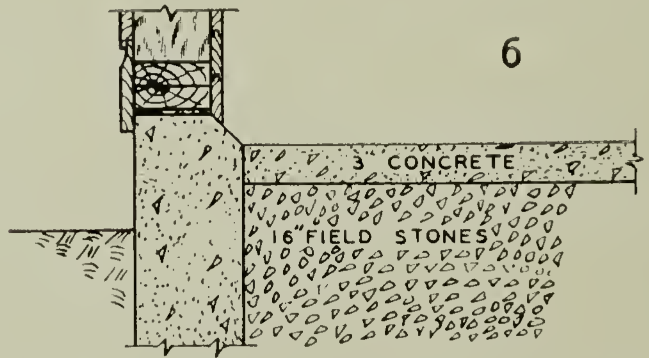

Clay Guarantee of Results

Poultry House Ventilation

The CLAY Ventilating System is guaranteed to circulate 35 cubic feet of air per hour per bird when the building is closed in cold weather and the system is installed and operated according to instructions furnished. It is further guaranteed that this circulation will remove the excessive moisture and that the room will contain no more than 3.3% of the air once breathed. Walls and ceilings will be free of moisture providing there is less than 7 degrees temperature difference between air of room and wall surface.